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no. 12

THE PRACTICAL PHOTOGRAPHER

(LIBRARY SERIES)

EDITED BY REV. F. C. LAMBERT, M.A.

• NUMBER 12 •

Pictorial Work of
Arthur Burchett.

Architectural Photography

By . .

Rev. T. Perkins,
F. H. Evans,
E. W. Harvey Piper,
H. W. Bennett,
C. Welborne Piper,
Maurice Houghton,
T. Kirkwood Hackett,
W. G. Fryer,
and others.

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The Practical Photographer.

Library Series. Architectural Photography.

No. 12.

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Contents of Our Next Number.

Our next issue—commencing the second year of the present Library Series of *The Practical Photographer*—(ready October 1st) will deal exhaustively with the **Carbon Printing Process**, The Making of Prints, Single and Double Transfer, Transparencies, etc.

The arrangements for our fourteenth number at the moment of writing are not definitely fixed. But it is extremely probable that this number will be devoted to the very important subject of **Retouching**. Other numbers in active preparation will deal with **Portraiture, Marine and Seascape, Flowers, Animals, Gum-bichromatic Process, Stereoscopic Work, Genre, Night Photography, Photographic Chemistry, Orthochromatic Photography, Telephotography, Lenses, etc.**

N.B.—Will readers who feel disposed to co-operate in the preparation of any of the above numbers kindly communicate with the Editor forthwith?

Hints for Intending Contributors.

The Editor will be pleased to carefully consider MS. bearing on any of the subjects announced. Preference will be given to MS. characterised by the following features:—

1. New or little known methods; formulæ personally tested.
2. Short sentences and simple language, with diagrams when needed.
3. Brevity so far as is consistent with clearness. The first and last pages of the MS. should bear the sender's name and address. The approximate number of words should be stated. Contributors may, if they please, send a brief outline or synopsis of their proposed contribution.

The Editor cannot undertake any responsibility whatever in connection with MS., but if stamps are sent for return postage, he will endeavour to return as quickly as possible any MS. not accepted for publication. MS. should reach the Editor not later than **six weeks** before date of publication.

Intending contributors will also find that it saves themselves trouble if they will send to the Editor an *outline* of their proposed communication at the earliest possible date, so that arrangements may be made to avoid overlapping by two or more contributors saying the same thing. In this first communication any proposed diagrams may be merely rough sketches.

In general it is well to put any drawings or diagrams on separate sheets and not interpolate them with the matter.

The MS. pages (which may preferably be typewritten) should have a clear margin of quite an inch left blank along the left-hand side of the page.

NOTE.—It would frequently save disappointment and the return of MS. if authors would state their willingness for extracts to be made from their contributions if the contribution cannot be accepted in its entirety owing to overlapping or duplication of portions by other contributors.

Criticism of Prints.

It is our desire to make the criticism of prints a special feature in our pages. The Editor gives his personal careful attention to this matter, and aims at making every criticism a practical, interesting, and instructive object-lesson. By paying attention to the hints thus given, often a poor print may be improved and a good print followed by one still better. In order to encourage readers to take great care in the preparation of the prints they send us, we offer **Three Prizes of Five Shillings** each, for the three best prints sent in each month. The winning prints will not be returned.

Print Criticisms: Awards.

A. H. Avery, "Homeward by the Evening Light"; J. Linley, "Through Parting Mists." Third prize divided between W. H. Witts, "Spring," and W. H. Randle, "The Blacksmith." Highly commended: H. P. Robinson, C. B. Alexander, J. Archer, J. H. Saunders, A. Turner, W. B. Cookson, R. Robinson.

Platinotype Printing Competition: Awards.

Silver Plaque: Dr. A. T. Larkin, "Poppies." Bronze Plaque: J. R. Sandilands, "Cramond Brig." Certificates: Rev. E. H. Day, "Buildwas Abbey"; Dr. T. T. Smith, "The Smith"; E. Hoppé, Portrait; S. G. Kimber, Architectural Study. Highly commended: L. Brooks, B. Schon, H. Holt, W. H. Adams, R. Robinson.

Midg Competition: Award.

J. H. Saunders. Highly commended: L. Watts, R. Robinson.

In our October issue we hope to give several reproductions of pictures contributed to our recent Junior Salon, Platinotype Competition and Print Criticism Competitions.

Autumn Junior Salon: Entry Form.

This will be found in the present number. Will competitors kindly observe the rules? Several entries on the last occasion were disqualified. Some sent more than three prints. Others sent prints without name, address or any identifying mark or clue whatever. Several entries arrived two or three days too late, etc.

Notice.

Will competitors please notice that the latest date for receiving prints for our competitions is that given on the coupon, and that we *cannot admit late arrivals*?

Notice.—Competitions.

Will contributors to our various competitions kindly refrain from sending *under one cover* prints for *different* competitions? This not only gives us considerable trouble, but involves the risk of the various pictures not being properly entered for the competition for which they are intended. It is far better for all concerned to send each lot of prints in separate parcels.

Notice—Queries.

In response to numerous requests from our correspondents we have pleasure to announce that we will do our best as far as space permits to reply to queries of a photographic nature. Will querists please (1) write plainly, (2) on one side of the paper, (3) as briefly as is consistent with clearness, and (4) give us the indulgence of their kind patience?

Pictures for Exhibitions.

To meet the convenience of those readers who are preparing prints for special dates (exhibitions, etc.), and cannot conveniently wait for printed criticism in our columns, we have arranged that readers may send us one, two or three prints with the usual Print Criticism Coupon and a fee of *one shilling for each print sent*. Within a week the prints, accompanied by a criticism, will be returned to the sender. The return postage must be prepaid in the usual way as in Rule 5. (See page v.) The fee must be sent with a letter and coupon to the Editor, and not enclosed with the prints. Each print must bear on the back the name and address of the sender.

Champion Class Competition.—Preliminary Notice.

We are arranging a novel competition which will only be open to those of our readers who have obtained a place on the Roll of Honour as winners of our Plaques, Certificates, Print Criticism Prizes, or Honourable Mention. This competition will take place towards the end of this year. Due notice will be given.



This Coupon Expires Sept. 30th, 1904.
THE PRACTICAL PHOTOGRAPHER. COUPON No. 24.

Prints for Criticism (or Queries).

RULES.

1. Write legibly, on one side of the paper only.
2. Put your name, address, and a number on the back of each print, and enclose this coupon.
3. Do not send more than three prints with one coupon.
4. State the *Month, Hour, Light, Plate Speed, Stop, Exposure, Developer, Printing and Toning* process employed.
5. If prints are to be returned, a stamped and addressed label or envelope *must* be sent **with the prints**.
6. The Editor reserves the right of reproducing any print sent in for criticism.
7. Prints should be addressed :—THE EDITOR OF *The Practical Photographer* (Print Criticism), 27, PATERNOSTER ROW, LONDON, E.C.



THE PRACTICAL PHOTOGRAPHER. COUPON No. 25.

Architecture Competition.

Name.....

Address.....

WRITE LEGIBLY.

This Coupon Expires Sept. 25th, 1904.

Architecture Competition.

A Silver and Bronze Plaque and Certificates will be placed at the disposal of the Judges.

1. Competitors may send one, two or three, but not more prints.
2. The subjects must be Architecture, interiors or exteriors.
3. Each print must bear the name and address of the sender, title, and also details of its production.
4. Marks will be given for technical and pictorial quality.
5. The Editor reserves the right to reproduce *any* prints sent in to this competition.
6. The Winning Prints will *not* be returned. Others will be returned, together with a brief criticism, if a stamped and addressed envelope or label be sent **with the prints**.
7. Prints must reach us not later than **Sept. 25th, 1904**, addressed :—

The Editor of *The Practical Photographer*
(Architecture Competition),

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A1	48 grosvenor green	A01	36	grosvenor green	B01
A2	48 duffel gray	A02	36	duffel gray	B02
A3	48 gray bark	A03	36	gray bark	B03
A4	48 playfield cream	A04	36	playfield cream	B04
A5	48 rough white	A05	36	rough white	B05
A6	48 dove	A06	36	dove	B06
A7	48 deep sea blue	A07	36	deep sea blue	B07
A8	48 autumn brown	A08	36	autumn brown	B08
A9	48 smoke gray	A09	36	smoke gray	B09
A10	48 fern green	A010	36	fern green	B010
A11	48 coffee	A011	36	coffee	B011
A12	48 wine red	A012	36	wine red	B012
A13	48 black	A013	36	black	B013
A14	48 olive green	A014	36	olive green	B014
A15	48 iron gray	A015	36	iron gray	B015
A16	48 russet	A016	36	russet	B016
A17	48 slate	A017	36	slate	B017
A18	48 drab	A018	36	drab	B018
A19	48 brown	A019	36	brown	B019

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C2	24 duffel gray	C02	24	wine red	C012
C3	24 gray bark	C03	24	black	C013
C4	24 playfield cream	C04	24	olive green	C014
C5	24 rough white	C05	24	iron gray	C015
C6	24 dove	C06	24	russet	C016
C7	24 deep sea blue	C07	24	slate	C017
C8	24 autumn brown	C08	24	darb	C018
C9	24 smoke gray	C09	24	brown	C019

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vi.

Kindly mention "The Practical Photographer."



La Belle Bretonne.

A. Burchett.



THE PRACTICAL PHOTOGRAPHER.

Library Series.

No. 12.

The Pictorial Work of Arthur Burchett.

By THE EDITOR.



R. ARTHUR BURCHETT'S photographic work has a special interest for all who regard photography as *one* means of art expression,—because his chief interest is in the palette rather than the camera; in other words, he is a painter first and a photographer afterwards.

Like many other ardent lovers of landscape he is a townsman by birth, and from his youthful days onward has had a passion for drawing from nature.

It was not until '85 that the camera became a partner with the brush. About that time his attention was drawn to some platinotype prints, and the good "quality" of this process at once appealed to our artist. This prompted numerous personal experiments in photography resulting in a series of fine pictures, which from time to time have appeared on the walls of the R.P.S. and Photographic Salon. We are happy in being able to reproduce several of these pictures, which, to our younger readers, are old enough to come as new works; while to our older readers, they will make their second appearance as widely-welcomed, well-remembered friends.

And here it may be mentioned that some of the pictures now reproduced are, comparatively speaking, "old masters"—that is to say, they go back to the late eighties—when many of our present-day self-styled leaders were in the nursery.

THE PRACTICAL PHOTOGRAPHER.

From these examples we shall rightly infer that Burchett divides his interest more or less equally between figure studies and landscapes. For camera work the balance of his preference is towards pictures in which some human interest is portrayed or suggested. And in this respect he has the "upholding" of our great master, Turner. But for palette and brush, Burchett has a preference for landscape treated upon the ideal rather than the realistic point of view. He is large-hearted enough to admire and enjoy anything that is honest and good work of its kind; it matters not by whom painted. This mental altitude of his will at once command our admiration and confidence.

As regards photography in its picture-making possibilities, he does not at present see any very great promise of much advance. "Photography," says he, "will always be photography, and it can never be anything else. Art is a creation of the brain, not imitative copying. Of the thousands of pictures painted every year, very few of them are works of art. Most of them are simply mannerisms. This is entirely different and apart from art, and should not for a moment be confused or confounded with it. Similarly with regard to photography. Much so called art is only mannerism, or a trick of the craft, the use of a particular lens, or printing process." These remarks are worthy of the very serious attention of our younger brethren, who are in constant danger of thinking art is a trick that may be learned by following some tip or dodge or formula.

Discussing the reasons why so many photographs fail as pictures, Burchett offers some valuable and far-reaching suggestions. For instance, often there is a want of pictorial interest in the print, or the interest is cut up and scattered all over the scene, *i.e.*, there is a lack of subordination of all parts to the focus of interest. Again, sufficient care has not been taken to include only desirable objects and to exclude the undesirable, the incongruous and in-harmonious. Bits of this and peeps of that have been included or permitted just to "fill up space."

THE PICTORIAL WORK OF ARTHUR BURCHETT.

The strong point in favour of photography, he thinks, is its power of recording passing events—records of far greater interest and value than the imaginative drawings of pre-photographic days. Its weak points are the dwarfing of the distance and distortion or exaggerated proportions of near objects. Burchett prefers close framing for large work and the use of plain mounts for small pictures.

La Belle Bretonne.—We well remember the widespread feeling of admiration which this picture aroused when it was first exhibited. A glance in those days was enough to show the vast difference between its painter-like arrangement and treatment when compared with the formal and wooden things then passing current as figure studies. The student will note the “placing” of the figure in the picture space in this as well as all the other examples. To this subject Mr. Burchett has given considerable attention. The quiet nature of the background and unconscious posing of the hands all show us the artist behind his picture. The broad arrangement of light and shade also has only to be noticed in order to show us the care with which the whole work has been thought out and executed.

Hampstead Heath.—Here is a scene at the door of our artist's home at that time. This is a fair and typical example of a subject that would be passed by ninety-nine out of every hundred camera-workers and condemned as “nothing in it.” But its severe simplicity, together with the fine suggestion of atmospheric effect, impart a subtle charm full of teaching that needs no words of ours. To the watchful eye, there is no need to make long journeys to find material for picture making.

Caller Herrin' is another charming and instructive figure study, possessing all the fine qualities of *La Belle*. In this instance we note a different light and shade treatment. Our one fault to find is in the slightly conscious expression of the girl. This is partly due to her eyes being directed towards us, though the head is turned a little to one side.

THE PRACTICAL PHOTOGRAPHER.

The Mid-day Hour.—This title and picture are most happily wedded. At the moment of writing one longs to join the foreground sheep and share with them the umbrageous shade of their cool retreat. The glimpse through the opening in the trees shows us the palpitating heat and glare of the full noon sun, where dimly we perceive one or two members of the nibbling flock who are braving the warmth in search of an early dinner. In this instance we have an instructive lesson in the harmonious effect of a broad scheme of lighting.—The grouping of the sheep in the foreground is happily caught. This picture re-iterates the valuable lesson of the foreground,—the foreground,—the foreground; and also shows that even with an interesting and well-arranged foreground we must also have a pictorial disposition of light and shade.

Winter.—From the burning heat of midsummer to the nipping cold of snow-clad midwinter is a wide jump. But we find our artist is quite equal to the effort. One can easily imagine that this scene is not far away from that shown in "Hampstead Heath." But how different is nature's expression in the two instances! If we are fortunate enough to reproduce this picture with even moderate fidelity the student will here perceive the useful lesson in rendering snow not as blank white paper, but as finely graduated shades, which only reach their ultimate limit in the whiteness of uncovered paper. This picture is also a fine example of tasteful selection. It just shows that indefinable something which painters know as "taste," the quality which distinguishes a personal impression from a mechanical transcript.

Chrysanthemums is rather different from the other figure studies and partakes somewhat of a decorative study. This example is particularly interesting for its grace of line and unity of design which so agreeably characterises the work. The poise of the head and harmonising of the figure with the background should receive special attention. The skilful massing of the flowers and avoidance of the usual spotty, patchy effect is particularly instructive.



Fig. 2.

A. Burchett.

The Knight.



THE PICTORIAL WORK OF ARTHUR BURCHETT.

Ceres is again a further departure in the idealisation of figure treatment. The title recalls the Roman Earth Mother, to whose bounty was owing the flowers and fruits in due season,—reminding us of Thomson's line

“Dark frowning heaths grow bright with Ceres' store.”

This skilful instance of brush development shows the aim of the artist in concentrating attention on the figure, apart from her surroundings, as a type or symbol rather than a work of pure imitation.

The Knight.—Chance rather than design brings this example of our series before us last. But it stands by no means last, least, or lowest in our appreciation. This is another of the strong figure studies that attracted universal admiration when first exhibited. The student will note the strong light-and-shade effect used in this case, and how it aptly accords with the strong light-and-shade character of the days of knight errantry. The skilful treatment of the graduated background will also teach a valuable lesson. The whole work is one of simple strength and directness of design. The texture or surface quality of the armour is excellently rendered; a tall, strong and knightly figure admirably suggested—a work simple, strong, and complete.

Once again we must ask our readers to imagine these tiny reproductions in printers' ink to be for the moment some five or six times their present size and skilfully executed in platinotype. But alas! it is not an easy matter to “bridle imagination into a chosen path.”

Most heartily do we tender thanks to the artist for letting us show our many unknown friends these little suggestions of works that it has been our privilege to have seen long ago, and remembered with so much enjoyment and pleasure.

We feel sure that our readers will join with us in the expression of regret that Mr. Burchett has of late years taken comparatively little active interest in picture-making by photography. And it is to be hoped that he may shortly have leisure and inclination to show us further examples of his camera craft.

Introduction to Architectural Photography.

By REV. T. PERKINS, M.A.



ANYONE who wishes to take up Architectural Photography should begin by gaining some knowledge of architecture itself, sufficient at any rate to enable him to determine approximately the date of a building, to recognise its style, and to distinguish between genuine old work and worthless modern imitations.

How to Commence.

It is not recommended that all the books mentioned in the foot-note should be read before exposing a plate. After one of the smaller ones has been read, it will be a great help if the student can get a friend with some knowledge of architecture to take him round some typical building and point out its features. Let the study of architecture thus have a start, then practical work can be begun, and the two can be carried on together, so that each may help and lend interest to the other.

Two Objects in Architectural Photography.

Some photographers will take photographs of buildings with a view to picture-making, others in order to obtain a series of prints interesting from an architectural, historical, or archæological point of view.

The picture-maker will deal with architecture as with any other material, paying attention to atmospheric effects, seeking to obtain broad masses of light and shade, sometimes suppressing detail, studying beauty of line and composition, and be satisfied with one or two good pictures of the building. The architectural student will go lovingly over any building that is worthy of his admiration, looking into every nook and corner, exposing plate after plate on doorway and window, boss and capital, tomb and canopy, statue and pinnacle. But though his chief object is to obtain records, yet he may do much by choice of position and lighting to introduce a certain amount of pictorial

INTRODUCTION TO ARCHITECTURAL PHOTOGRAPHY.

quality into his work without sacrificing the detail which he wishes to reproduce. He should try to enter into the feelings of the builder or carver who did his work, with the view of its being looked at from certain points. It is not sufficient to set up one's camera anywhere, thinking only, that from this point I can get in all I want. The best spot should be chosen, and depend on it the architect, if he were worthy of the name, so arranged his building and all its parts that they could be best seen from easily accessible points of view. It is generally well to decline with thanks the offer of an upper window from which to photograph a building, and it is hardly fair on the sculptor, who meant his statue to be seen from the ground, to erect a platform some twelve feet high on which to place the camera.

The Camera. It is convenient to use a camera of moderate size for architectural work, especially for interiors; for increase of size necessitates a corresponding increase of focal length in the lenses, and the longer the focal length the more the lens must be stopped down to obtain "depth of focus." To what extent this stopping down must be carried has been much discussed, some taking into consideration the fact that as the larger picture will be looked at from a greater distance, more diffusion may be tolerated in it; others arguing that stopping down should be carried so far that the same absolute sharpness should be found in the picture whatever its size. If we go upon the former supposition, then we may say that if a five-inch lens is used on a quarter-plate with $f/8$ and from the negative an enlargement equal to the size of a whole-plate is made; then to get the same definition in a direct print taken with a ten-inch lens of the same kind on a whole-plate the lens must be stopped down to $f/16$ and the exposure quadrupled.

Now, the shorter the exposure, provided it is sufficient, the better; not only is a long one tedious, but it decreases the number of plates that can be exposed in a given time, and, still worse, it allows change of lighting from the motion of the sun during the exposure, and this may seriously affect the result.

My own preference is for half-plate size. The camera should have square bellows, a rising front, and a falling one also, if possible. If a front focusser, this may not be possible; the hole in the rising front for the lens flange may, however, be cut about an inch above the central position; then, if the sliding panel is put in upside down, the effect of a falling front is obtained. It is well to have an arrangement for bringing the back forward, otherwise sometimes the baseboard may cut off some of the foreground when a short-focussed lens brought low down is used. Most cameras are provided with a swing back, but it is a movement that I seldom use; I prefer to get lofty objects in by working with lenses which cover far more than the plate I am using, and raising the front considerably. Swinging the back necessitates a small stop to get objects at the top and bottom of the view in focus together; much less stopping down is required to get the margins of the field of view of the lenses I use sharp. A front that slides crossways is sometimes of use, as, without swinging the camera round, more of one side or other of the view may be taken in, its effect is to displace the centre of vision horizontally. I have provided my camera with an adapting back, which enables me to use the slides belonging to a quarter-plate camera on my half-plate one. It consists (as the diagram will show) of a board that slides into the same place as the ordinary double backs do; it is pierced with an aperture of $4\frac{1}{4} \times 3\frac{1}{4}$ inch, and provided with strips forming a rebate into which the quarter-plate backs will slide. Of these I have six, but in one of them I place a sheet of ground glass, which, when both shutters are drawn, serves as a focussing screen. Thus, in addition to the half-plates in their own backs, with a very small increase of bulk and weight, I can carry ten quarter-plates, which are often of great use for detail work.

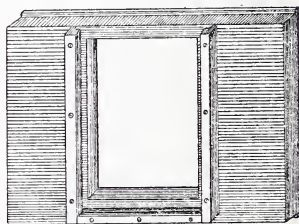


Fig. 51.



Fig. 3.

A. Burchett.

CALLIE MERRIN.



Fig. 4.

A. Burchett

Winter Sunset on Hampstead Heath.

INTRODUCTION TO ARCHITECTURAL PHOTOGRAPHY.

The Tripod. The tripod stand should be of sufficient height to allow the view to be focussed without stooping, and not too high to prevent the spirit-level fixed on the top of the back part of the camera being examined when the photographer stands on tip-toe. It will be convenient to have what is called a three-fold stand, the lower division made to slide. If a little piece of india-rubber tubing is slid on to the feet and allowed to project an inch or so, it will prevent the tendency of the feet to slip on polished floors.

The Lens. The lenses used for architectural photography must (with the exception noted below) be rectilinears, and it is a great convenience if they will open out to at least $f/8$, they should be so well corrected for spherical aberration, that if the view is focussed at full aperture, stopping down will not impair the definition. The old-fashioned rapid rectilinears with a hollow field are sometimes useful for such views as a church interior, taken from one end, as the curvature of the field will help to get the nearer objects at the sides, and the more distant ones at the centre of the plate in focus together with a comparatively large stop. But the advantages of the modern Anastigmats are so great, that on the whole they are to be recommended. Most of my half-plate architectural work is done with two Platystigmats of $4\frac{1}{2}$ and 8 in. focus respectively. The 8 in. shows no dark corners on a 12×10 plate, so that with it the rising front of my camera can be used to its utmost extent (about 2 in.), the $4\frac{1}{2}$ in. lens will permit the front to be raised about an inch, which has the effect of bringing the horizon down to about two inches from the bottom of the plate when its longer sides are vertical. An intermediate lens of the same series, 6 in. in focus, would form an ideal set. The full aperture is really about $f/7.3$, though nominally $f/8$. If a longer focus than 8 inches is required, the back combination of the 6 in. and the 8 in. used as single lenses would have focal lengths of 12 and 16 inches respectively, and would scarcely show any deviation from rectilinearly on a half-plate.

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Wide-Angle Lenses.

In architectural work, more than in any other, the peculiar defects due to the injudicious use of the wide-angled lens are apparent; the perspective is absolutely true, but the use of a wide-angled lens generally means the choice of a portion too near the object, and hence a too violent convergence for pictorial effect of lines which fall near the edge of the plate. This, as in the view of St. Alban's (fig. 10) makes the building look far too long, and in that of Turnworth Tower (fig. 9), makes the near angles at the top and bottom unpleasantly acute. If a wide-angled lens is used for a horizontal view of a nave taken from one end, it gives the effect of the arcading, being bent backwards towards the ends of the plate. In certain cases, the lens may be used without fear, *e.g.*, when taking—(1) a flat wall at right angles to the axis of the lens; (2) an upright view, especially if trimmed down to a narrow strip (see fig. 11); (3) an exterior in which the corners are occupied by sky, with only a central spire rising from the building (fig. 13). If the top of a tower occupies a corner, the distortion is very noticeable. (fig. 9).

The Telephoto Lens.

The telephoto lens, useful if judiciously employed, is as liable to abuse as a wide-angled lens. For interior detail work, an ordinary lens of long focus, on account of its larger aperture, which makes focussing easier, is more convenient, but for exterior details, the telephoto lens is most useful. Yet if it be used with high magnifying power to take the whole of a building at a considerable distance, a quarter of a mile for instance, the result is most unpleasant, the converging lines are so nearly parallel owing to the great distance of the vanishing points from the centre of vision, that walls, really at right angles to each other, seem as though almost in one plane.

Plates.

Plates of ordinary rapidity answer well for exteriors, but rapid plates are better for interiors—first, because exposures are greatly shortened—secondly, because quick plates, as a rule, give softer negatives, and these yield the best prints of interiors. Isochromatic plates are

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of advantage when, owing to painted windows, or a yellow or greenish tint in the glass, the light is somewhat non-actinic. In photographing painted windows, isochromatic plates are indispensable.

Halation. Plates should always be backed to prevent halation, which is apt to show itself more strongly in negatives of architectural interiors than in any other kind of photograph. A complete cure for halation, free from all other disadvantages, remains to be found. Paper negatives are free from that part of halation caused by internal reflection; films are not much affected by it, but there is a difficulty in getting paper or celluloid to lie perfectly flat, and the former is not transparent. A stained film between the sensitive film and the glass should entirely prevent it, but this film often leads to frilling, so that at present backing seems to be the most generally useful precaution against halation.

Focussing. Having carefully chosen the subject and decided how much you intend to take in, set up your camera, level it carefully, and select the lens which will most nearly fill the plate with the chosen subject. Focus the chief object with open aperture, and stop down only enough to get sufficient definition in other parts. If the view is an interior, and it is too dark to see the definition in these other parts, one can only use one's judgment founded on previous experience to guide one in stopping down. Sometimes it is so dark that even with full aperture it is difficult to focus. The best plan for overcoming this difficulty is always to take a box of matches and a piece of candle, and to set the lighted candle so, that while concealed itself, it strongly illuminates a card or envelope placed against the object you want to focus; the corner of the card is easier to focus than a flame; by getting a friend to move the candle, while your head is under the focussing cloth, until its image reaches the ends of the plate, you can, by removing your head from the focussing cloth, and looking at its view from the position (as near as possible), of the lens, see how much of the subject you have included.

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Exposure. To rightly estimate the necessary exposure is one of the chief difficulties of interior photography. An under-exposed interior is worthless. Hence it is always well to err, if at all, in the other direction, bearing in mind the fact that if direct sunlight, streaming through a colourless glass window, falls upon white stonework, excessive exposure may lead to reversal. To estimate exposure, some place an actinometer in some convenient point of the subject being photographed, and expose until the sensitive strip has once, twice or more often matched the tint; the exact number of times required for the plate and stop having been determined by previous experiment, the lens, if necessary, may be capped while the sensitive strip is being pulled out, or the sensitive disc of the actinometer turned round. This method is a very useful one. Others always preserve careful notes of previous exposures, and the character of the resulting negatives, and trust to their judgment based on experience. Tables have been prepared giving approximate times of exposure according to the appearance of the view on the screen, or rather the size of the aperture, as the iris is gradually closed up, at the time of the disappearance in darkness of detail that is required to be seen on the negative. But this method is of no great value, as it takes no account of the colour of the light, a pale yellow being to the eye almost as luminous as white light, while its actinic power is far less. The actinometer does take this into account. Fortunately, however, plates allow of great latitude in exposure, so that if, for instance, one minute is sufficient, an exposure of several minutes will produce with suitable development a negative from which an almost identical print may be made. It is well in a day's work to give all the plates what may be called equivalent exposures, taking into consideration change of stop or lighting, or brand of plate, and to expose two plates on one of the subjects; the development of one of these will give a clue to the necessary treatment of the others. If the time of exposure is likely to be long, it is well to adopt a method suggested some time ago by the Editor of this magazine, namely,



Fig. 5.

Winter.

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Fig. 6.

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to give part of the exposure with a small stop, and finish it off with a supplementary exposure with a large one. The time will be shorter than if an equivalent exposure were given with the small stop, and the result better than if the same total time were given with such an intermediate stop as would make this exposure equivalent to that actually given. It is said that the small stop gives sharpness, and the large one has a softening effect.

Development. It will not be necessary to dwell at any length upon development, as this subject has been fully dealt with in a previous issue. I have already said that for interiors, a soft negative is desirable, it should be thin, full of detail, have no harsh contrasts, and yet not lack vigour; these characteristics will be secured by using a normal developer, greatly diluted, which may be poured off when the high-lights appear, and in its place water poured on, in which the plate may be allowed to soak for some time. The detail will come out gradually without the high-lights being blocked up. It will then be seen if local development or restraint is desirable, and when the water is poured off, the original developer may be poured on. (Modified if necessary).

Hints on Suitable Positions.

It has been said that care must be taken to choose the best position for the Camera. A few hints may be given. Doorways and windows should be taken full in front. If taken from a side the beauty of the curves of the arched heads are often quite destroyed (see fig. 12). Never cut off the point of an arch or the base of a pillar. Always show some of the pavement below the latter. When taking arcading let a pillar occupy the edge of the plate. In taking a general view of a nave place the camera a little on one side of the middle line and turn the lens towards the other side (compare figs. 11 and 14). If there are seats or chairs do not put the camera so that the line of their backs runs across the plate or so that either of the lines formed by the bench ends runs vertically downwards. Remember that views looking obliquely across a church are often more pleasing than those

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looking directly along or across it. Don't forget to go all over the transepts in search for points of view.

The Roof.

If we want to photograph a roof we may focus it by lying down on the floor holding the camera over our heads and when duly focussed insert the slide, pull out the shutter and place the camera with its back on a chair. Or we may measure or obtain from guide books or vergers the height of the roofs of aisles or naves, and carry the camera the same distance away from some easily focussed object, focus that and then set the camera down on the floor with the lens pointing upwards.

In ordinary interiors it is well to keep the camera not more than 5 or 6 ft. from the floor, if however the floor occupies too much space on the plate the camera may be brought lower down.

Pictures out of the common may be taken from unusual positions such as the triforium, clerestory, or roof; such views are sometimes pleasing as well as interesting. Advantage may be taken of certain states of weather or seasons of the year, for instance, a porch is better lit by the low winter midday sun than by the summer sun high at noon, light thrown up through the clerestory windows from snow outside the building will often make the taking of a dark roof easy.

For interior work sunlight sufficiently strong to throw a soft shadow so as to give relief to the carved work is desirable. Glaring sunshine gives rise to harshness.

In photographing rooms a corner position for the camera and a diagonal direction for the axis of the lens should be avoided. Chairs and other easily moved pieces of furniture should be cleared away from the immediate neighbourhood of the camera. Care should be taken that the glass of picture frames does not reflect light from the window, a little wedge of paper placed between the frame and the wall will generally turn the reflection aside.

Sundry Cautions.

In cold weather one should always be on one's guard against dewing of lenses. If a lens is taken from

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cold air into a warm building moisture will be condensed on its surface. It is no use wiping it off, for it will soon reappear. The lens must be warmed to the temperature of the air by putting it into one's pocket, or holding it over a stove. Out of doors on a cold day the lens may be dewed by putting on after focussing a cap which has been warmed by holding it in the hand. Always therefore lay the cap on the camera and touch it only with the finger tips when putting it on the lens before exposure. If light from a window falls on a lens it may fog the plate; it is therefore difficult to photograph an object under a window. I made a little framework (see fig. 52) of wood through slits in which blackened cards can be inserted; this framework I fasten to the sliding base-board which covers the front, placing it an inch or so in front of the lens and covering the space between it and the front with a cloth, and push the cards in while

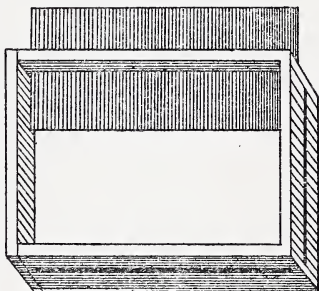


Fig. 52.

looking at the focussing screen until I cut out the window or source of light, or shade the lens sufficiently to destroy the fog. A sheet of cardboard laid on the top of the camera with the focusing cloth placed on it and hanging down on either side protects the lens from side light. A square of blackened cardboard with an aperture slightly less than the size of the plate, put between the folds of bellows an inch or two before the plate will cut off light reflected from the image of a window thrown by the lens on the inside of the bellows.

Figures. Figures frequently cause trouble. Great patience often has to be exercised when photographing exteriors, as we wait till the view is clear of them. If a shutter exposure is made some figure is almost sure to be caught in an ungainly attitude; if there are so few present that we can ask them to stand they will generally assume a stiff position. One plan which sometimes

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answers is to stop down as much as possible, give a long exposure and disregard the figures, for if they keep constantly passing along the road they will not leave any trace on the plate; if, however, it is noticed that anyone is standing still the cap must be put on and the exposure completed when the figure has moved on. In interiors, unless the figures pass through beams of sunlight or wear white dresses, there is little danger of any harm being done; I have never found any visitor to a church make any objection to moving if courteously asked to do so. Sometimes a verger may be conducting a party round and may pause before some object of interest for a few minutes. In such instances the cap should be put on until they have moved away.

Permits.

No permission as a rule is needed for photographing exteriors of any public buildings, or private houses from public ground, but ordinary courtesy demands that a camera should not be taken on to private ground without permission. Permission to photograph the interior of a parish church should be asked of the Rector, even if the door is found unlocked; the Dean or Canon in Residence should be applied to in the case of a cathedral church, except where fees are charged, in which case the verger is generally authorised to receive the fee and sign the order. It often prevents disappointment if application is made beforehand by letter in which a stamped directed envelope for reply is enclosed.

The following books will be found useful to the beginner :—
Parker's A B C of Gothic Architecture. 3s.

The present writer's Handbook to Gothic Architecture. 3s. 6d. (This book gives lists of examples for study in every county, and deals with Domestic as well as with Church Architecture).

Parker's Introduction to Gothic Architecture. 5s.

Parker's Concise Glossary of Architecture. 7s. 6d.

For the more advanced student the following are recommended :—

Rickman's Gothic. 16s. (Parker).

Moore's Development and Character of Gothic. 21s. (Macmillan).

Prior's Gothic Art in England. 31s. 6d. (Bell).

Fergusson's History of Architecture in all Countries. In five volumes. (Murray).

Blomfield's Renaissance. Either the large work in 2 vols. or the abridgement, 10s. 6d. (Bell), is useful for its period.



A. Burchett

THE MID-DAY HOUR.

Notes on Architectural Photography.

By WILLIAM G. FRYER.



THE following notes are specially written for the worker, who would make architectural photography a success, pictorially considered, and also as a means of delineating the details of the architectural objects it is desired to reproduce. At the very outset let me say that no one can possibly do any serious Architectural Photographic work who is not prepared to sacrifice time, labour and money. The architectural photographer must be provided with the best apparatus.

Size of Plates. The first question that naturally arises in the mind of the architectural photographer is "what is the most suitable size of plate to work with?" This must be regulated (1) by the photographer's purse. (2) By the use to which he intends to put this branch of photography. (If the optical lantern be the ultimate destiny of his pictures, then without doubt he will use the size most suitable for this purpose, *viz.*, quarter-plate.) (3) By the ever present inconvenience of the larger sized plates, owing to the bulkiness and weight of the apparatus used for working the same.

Tilting Tripod Head. It will very often be found necessary to, tilt the camera upwards a few degrees, in order to get the image of the top of (say) a high building on the focussing screen. To do this in the ordinary way, one would have to adjust the tripod legs so as to get the top at the required angle, and this usually means that we may get the camera and tripod in a none-too-secure position, and even gently drawing the shutter of the dark slide may displace the view to be included on the plate. A much better plan is to obtain an adjustable tilting tripod head to be screwed onto the ordinary tripod top in the usual way, and by securing the camera to the upper part of this arrangement it can instantly be adjusted to any angle without so much as touching the tripod legs at all, the camera remaining perfectly rigid the while. This tilting tripod top (see figure 53) is also

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very useful for photographing ceilings if it be made so that the top may be turned through a quadrant of a circle. I am not aware of the existence of such a tripod top on the market, but anyone with a little ingenuity could make one, or have one made for him by a local cabinet maker at a nominal cost.

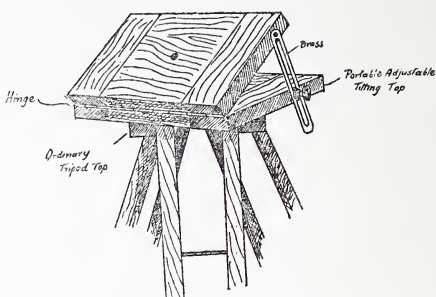


Fig. 53.

Wide-Angle Lenses.

Most of the modern anastigmats are wide-angle lenses—that is, they embrace a large angle of view; when these are used on a plate whose longer side is less than the focal length of the lens very little distortion will be noticed in the resulting photograph. But a great deal of stray light will necessarily enter the camera even if it does not reach the plate direct. Especially is this noticeable when photographing an interior with fairly light windows on either side of the view embraced by the plate. Unless this stray light be intercepted before it reaches the plate by reflection from the bellows, etc., of the camera, it will produce a film of fog over the whole plate surface, and, to a very great extent, spoil the resulting photograph. To avert this, a small piece of black card, having a rectangular hole cut in it, whose sides are proportional to the dimensions of the plate, should be inserted between the lens and the plate so as to intercept all the light from the lens which would otherwise fall on the bellows of the camera. (Fig. 54).

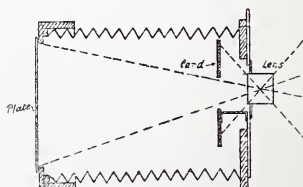


Fig. 54

While on the subject of wide-angle lenses, it is well to note that a photograph embracing a very large angle looks perfectly natural (in fact, strikingly so), if one's eye occupies the same position as the

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centre of the lens originally occupied with respect to the photograph. This can only be done in most cases by using a magnifying glass of the same focal length as the lens, in viewing the photograph. Hence it follows that the larger the dimensions of the photograph the more natural will it appear if viewed at the ordinary distance.

If a hand camera be used for architecture, it should be of full-size-finder type, provided with a reversing back, focussing arrangement, and rising and falling front.

Development, After-Treatment. These subjects have been dealt with extensively in volumes Nos. 6 and 7 of this series, but a few words of caution as to the development of architectural photographs will not be out of place here. Firstly, use plenty of non-actinic light for examining the plate, and keep the dishes well covered during development. Secondly, do *not* over-develop, especially in interior work. Be sure that you can judge the ultimate density of the negative by examining it in front of the light you are using. There will be found to be a considerable variation in this respect in different brands of plates. Moral: stick to one brand and master it thoroughly. *Lastly.* Local Reduction will very often be found of great service where such a subject as a bright stained glass window has come out too dense in a negative.

Printing Processes. For pictorial effect, in my opinion nothing can excel platinotype paper, or even approach it in artistic merit. It has, however, the disadvantages of (1) being only available in a good strong daylight (2) it cannot be controlled in development so easily as other kinds of paper. Some of the slow 'gaslight' bromide papers can be made to give very beautiful prints of architectural subjects, and they have become very popular on account of the ease with which they can be manipulated. Here again local development will be found very useful.

Figure 50 A, is taken from a 'gaslight' print of the choir, York Minster. The window being a light one, is rather difficult to photograph, and has come

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out rather too dense on the negative, and there is also abundant halation present. But by washing the print when the other parts have been sufficiently developed, and by means of a soft camel-hair brush continuing the development of the window and surrounding parts, with a rather strong developer, the resulting photograph appears as fig. 50 B. Great care must be taken that the developer does not spread to those parts that are already sufficiently developed, or dark patches will be the result. It is often necessary to wash the print several times during this process.

For showing elaborate and fine details of an architectural subject, a good brand of gelatino-chloride P. O. P., toned to a rich brown-black, and squeegeed on plate glass is effective.

Photography as a Means of Measuring Buildings.

Photography may be made to serve a useful purpose and greatly aid an architect in measuring up the front of a building whose exact dimensions (say for alterations) could only be obtained by means of long ladders and a great deal of laborious work. In the ordinary way a fairly accurate sketch must first be made of the subject, and then each detail carefully measured and made a note of on the sketch. This process must be continued until the draughtsman has enough data to enable him to correctly portray the front of the building on paper in his office. Now if a photograph of the building be taken from a point F. (see Fig. 55) exactly opposite the centre of the building, all dimensions of objects in the vertical plane, A B, on the building will be in as exact proportion to each other on the resulting photograph as they are in reality; so that if the length A B of the front of the building be accurately measured, all the other dimensions, widths and heights of windows, etc., etc., can be found by proportion: *e.g.*, in Fig. 55 if A, C, D, E, B represent any points in



Fig. 55.



Fig. 8.

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Chrysanthemums.

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one vertical plane and a, c, d, e, b, the same points on the inverted image of the building, the distances ac, ad, ae, and ab, will be exactly proportional to AC, AD, AE, and AB, respectively. It would even be possible to photograph a building to scale (as far as the front is concerned) by graduating the ground glass of the camera by lines drawn a known distance apart (say, quarter of an inch). Then by first measuring a certain dimension on the building and making this dimension occupy just the right number of spaces when examining the image on the ground glass, the rest of the resulting image would be as easily measured as a plan can be in the ordinary way, by applying a scale to it.

Of course such photographs as these would have no pictorial merit whatever. It is distinctly *against* all artistic taste to plant the camera *directly* in front of anything we wish to photograph (unless copying a photograph, diagram, or the like); but for the special purpose referred to, it is absolutely essential that each horizontal line in the building should be perfectly parallel to the top side of the plate. The further away from the building (up to a certain point) we can get, the better will such a photograph be.

Scale. Sometimes it may be required to show the actual size of some piece of detail. A two foot rule placed close to it in a place parallel to the camera back and photographed together with the object will show its size.

Sky Shade. It is wonderful what a difference in the brilliancy of a negative as sky-shade will make when judiciously used—particularly is this the case when working with a lens which will cover a much larger plate than that which is being exposed. The less stray light there is in the camera the better.



Notes on Interior Work.

By HENRY W. BENNETT, F.R.P.S.



ESTIMATING the exposure necessary for interior subjects is a difficult problem to those unaccustomed to architectural work. A meter is practically valueless, as the effect of shadow details on a sensitive plate is modified by their distance. No meter can gauge this effect—shadow detail softened by distance and intervening atmosphere,—but the photographer can judge its value and expose accordingly.

Exposures in interiors will vary considerably, and it is as desirable to expose a plate correctly as in landscape work. Under-exposure should be rigorously avoided, as in most cases the subjects present very harsh contrasts. Slight over-exposure will, consequently, allow control to be exercised in development with much greater success than in evenly lighted landscapes.

In estimating the exposure necessary for any subject, the number and size of the windows must be taken into consideration, and also the manner in which they light up those parts of the building which form the deepest shadows of the picture. Where light falls very obliquely from windows on portions forming the subject of the photograph, considerably longer exposure is necessary than where a direct lighting can be secured. The oblique light, will, however, produce a more effective result.

Stained glass in windows necessitates a considerably longer exposure than the light glass frequently used for church or cathedral windows. In most cases from three to five times the exposure should be given, but the predominating colours and their depth must guide the worker. Trees or buildings that obstruct windows will increase the time of exposure, and their presence should be noted before entering a building, as it is difficult to realize after remaining in a dimly lighted church, that the exposure must be several hundred times longer than would be sufficient for the exterior.

NOTES ON INTERIOR WORK.

As most workers will choose many of their interior subjects from the cathedral churches, typical exposure for different parts of such buildings will form the most simple means of conveying suggestions for correct exposure for this work. The information given will enable those who propose to add architectural studies to their other photographic work to compare the subjects with the actual exposures. It will also form a basis for judging other subjects.

The naves of most cathedrals are well and evenly lighted, and the stonework diffuses the light well. An exposure of one minute, under the best possible conditions, in June, using aperture, $f/16$ and a rapid plate, about 200 H. & D., will be correct in most buildings. In some cases two or three times this exposure should be given. In the aisles of the naves the time necessary may vary from one or two minutes where there are unobstructed light glass windows, up to eight or ten where glass is all stained and the windows are small. In this, and the other examples given the conditions previously named are assumed. In the choir of a cathedral the lighting is generally very uneven. The dark stalls and their canopies receive least light, while the light coloured stone of the upper portion is well illuminated. This renders a long exposure necessary in order to produce a negative of good gradation. It will range from four to sixteen minutes according to the varying conditions in different buildings. In all, the exposure must be longer if the camera is placed between the choir seats and those near are included in the picture, than would be necessary if the camera were at a distance from them.

Windows. — Wherever practicable, windows should be avoided. At the best, they form bright patches of light. And usually these strong lights destroy the effectiveness of the picture. The objection to them is that they are lighter in tone than any other portion of the subject. Although the inclusion of the windows themselves is very undesirable, the effect that they produce—the manner in which they may light up certain parts of a subject—may frequently form a valuable assistance in making an effective chiaroscuro.

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Foreground.—The value of foreground is not always sufficiently appreciated in architectural work. There should always be sufficient floor shown in front of important vertical objects to suggest space. Nothing is worse than to see the floor cut off immediately in front of an important column or wall. The floor lines running into the picture convey instinctively the sense of space, and suggest that the observer is standing at a distance from the nearest vertical plane. Where there are strongly marked lines on a floor they assist materially in suggesting the impression of a receding horizontal plane.

Focussing.—At times there is difficulty experienced in determining the portion of the subject to focus sharply. When the subject is exceptionally deep—a long cathedral aisle, for example—the extreme distance may be disregarded, and a certain portion determined that must be sharply defined. Of this portion, a spot should be selected about one-fourth of its length from the part nearest to the camera, and this spot focussed sharply. With a very moderate reduction of the aperture, the definition should be satisfactory throughout.

Covering power of Lens.—Before commencing interior work, careful tests should be made of the covering power of the lens, and the extent to which the rising front may be used. These tests should be made on landscapes, as the image can be more plainly seen. A subject should be focussed with the lens opposite to the centre of the plate, and then the extent to which the aperture must be reduced to obtain fine definition over the entire plate ascertained. The front should then be slightly raised and the image at the lowest corners again examined; and this operation repeated until it is definitely ascertained how far the lens can be raised without showing dark corners on the screen, and also how much extra reduction of the working aperture is necessary to give good definition to the corners when the maximum rise is utilised. A satisfactory lens should allow a rise of one-fourth of the length of the plate at least, and a smaller aperture than $f/32$ should not be necessary. Definite

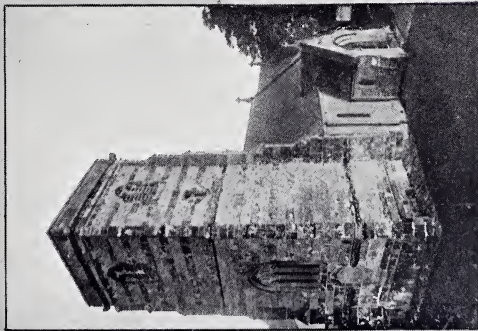


Fig 9.

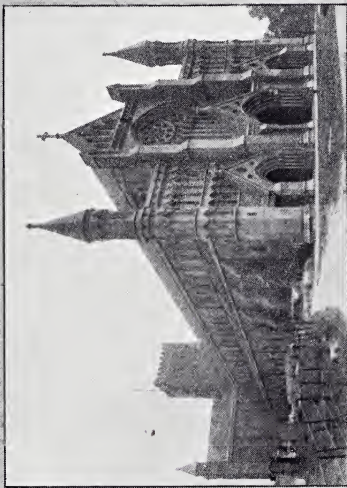


Fig. 10.

(*Vide pp. 10, 13, etc.*)

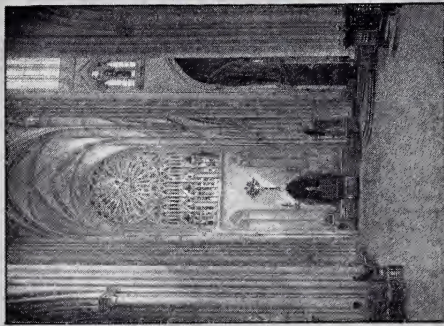


Fig. 11.

T. Perkins.

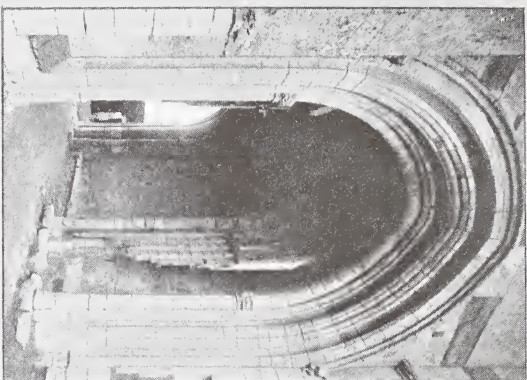


Fig. 12.



Fig. 13.

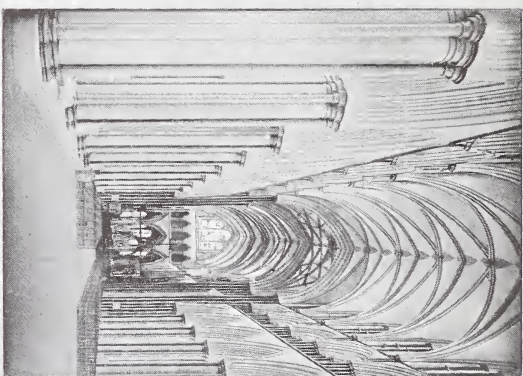


Fig. 14

information of this character will be found very valuable in interior work, as it is impossible to see the darker details when a small aperture is used.

Character in Architecture.—It should be recognised in this work that the character of the architecture is a most important quality. Although a strong effort should be made to produce a result as pictorial as possible, the architectural character must be regarded as equally essential. A photograph that does not render this character effectively cannot be considered successful, however good it may be in other respects.

Development.—In developing negatives of interior subjects harshness or too strong contrast is the defect that will frequently occur. It will probably be recognised that the actual contrast presented in many subjects is very great, and unless special precautions are taken excessive harshness in the negative is inevitable. If the exposure should be rather too short, the tendency to this defect will be increased. For such subjects a full exposure should always be given, and then softness of gradation can be secured by using a diluted developer, the relation of the constituents being normal excepting the quantity of water, which should be from two to four times the normal. By the simple expedient of diluting the developer a degree of softness may be secured that is quite unattainable by other means. So many interior photographs are ruined by their harsh contrasts that it seems to be very desirable to warn the inexperienced against this defect, and to indicate the most simple means of avoiding it. Discrimination must be used in determining the composition of the developer. A subject may be not only dark, but almost uniformly dark, and so present but little contrast. In such a case development should be similar to that adopted for ordinary landscape work.



Some Hints to Architectural Photographers.

By C. WELBORNE PIPER.



A building designed entirely by one man and forming one complete work of art is of necessity designed with the idea that it will be seen from certain particular standpoints. In the case of a church interior the main point of view is the central west door, and points of next importance are situated on an axial line leading from the west door to the altar.

Symmetrical Views.—Perfect symmetry is usually observed on the two sides of the axial line of a church under the governing idea that the altar is the predominating feature within the building, and attention should therefore be especially directed to it. The finer the architecture the more strikingly impressive is such a symmetrical vista, and it should not be neglected by the photographer under the mistaken idea that exact symmetry is necessarily “inartistic.”

Next to the west door the most important symmetrical view point is likely to be one nearer the chancel and including portions of the two transepts. The entrance to the chancel may afford another striking east view, different from either of the others, while the same point and also the altar often afford good western views. As a rule, however, western views are far inferior in interest to eastern views.

Transepts.—Transepts are not usually designed to form symmetrical vistas, nor intended to be viewed from each other. Generally speaking, a western transept wall is designed to be seen from the chancel and an eastern wall from the nave. The best views of the architecture are therefore generally to be obtained from those positions.

Complex Buildings.—Buildings that represent the work of different men and sundry ages form collections of works of art rather than complete

SOME HINTS TO ARCHITECTURAL PHOTOGRAPHERS.

works, therefore view points should be selected on different principles. General views have an historical rather than an artistic interest, and usually form unsatisfactory pictures. No symmetrical vistas may be obtainable, as symmetry is often entirely destroyed by alterations and additions.

Additions.—Speaking generally, each addition has been designed with the idea that it will be seen from some part of the pre-existing building. The older portions are therefore likely to afford the best view points, and dates should be noted. Occasionally a new addition will provide a station point from which a good view of an old part is obtainable, but this is more likely to be accidental than intentional. While each addition should be separately studied, and no one view should include too great a mixture of various styles, yet the junction of two different styles, if well carried out, often affords features of great interest.

Mouldings and Lighting.—In real architecture mouldings are neither designed as ornaments nor as decoration, though they may themselves be sometimes ornamented or decorated. They are intended to produce effects of light and shade, softening or emphasizing outline, or revealing structural lines, therefore the lighting must be very carefully selected to avoid the production of false effects. The positions of the windows will give some idea of the manner in which the architect anticipated the light would fall, but the effects at various times must be compared to obtain the best effect possible.

In buildings showing a mixture of styles and periods and not lighted in accord with one specially designed scheme, awkward cross lights may exist at times, and the selection of the lighting is more difficult, and requires much consideration.

Carving.—Carving is often applied to introduce effects of light and shade on surfaces. In other cases it is employed for its own sake, suitable spaces and surroundings being provided for it by the architect. These architectural uses of carving must be distinguished from the after introduction

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of it in places not specially designed for its reception. When the carving is an essential part of the design it should be so shown in a photograph; not by itself as a detached specimen of the carver's craft. On the other hand introduced carving alien to the design of the building is best shown isolated, as it is not architecture.

Blank Walls.—Blank wall surfaces play an important part in an architectural design, and their proportions and general arrangement form a severe test of the architect's skill. Hence they should not be carelessly cut down or left out altogether in photographs. Photographers are apt to give too much attention to the isolated representation of "features," "bits," and "details," and to ignore adjoining wall spaces.

True Drawing.—Lenses giving distortion should be avoided because they falsify proportion and distort arch curvatures. Test the lens by photographing a high vertical object with the camera tilted and the swing back vertical. If the drawing is correct upright lines will be vertical in the photograph, but a single lens or a portrait lens will show them converging upwards and curved, while some types of telephoto lenses will show them straight but diverging upwards.

General Hints.—The architect only designs from probable and natural points of view, therefore views from strange positions will not illustrate his design, though they may be curious and interesting, and may record particulars that cannot be seen from ordinary positions.

In record work do not on any account neglect vaulting and pavements. Pay particular attention to strange or awkward features, such as shafts or caps half buried in a wall, straight joints, built up arches, traces of alterations and removals. These sometimes give valuable historical evidence more to be relied on than written records.

Never enter a strange church that you know to be worth seeing by any other entrance than the West door. You will not get a true impression of the building if your first view is not from the one best point.



Fig. 15.

PRIOR'S DOORWAY, ELY.

(*Vide* p. 40, 52.)

F.C.L.

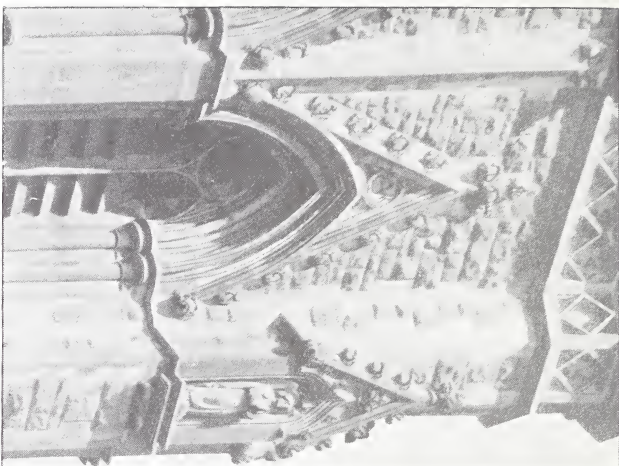


Fig. 16.



Fig. 17.

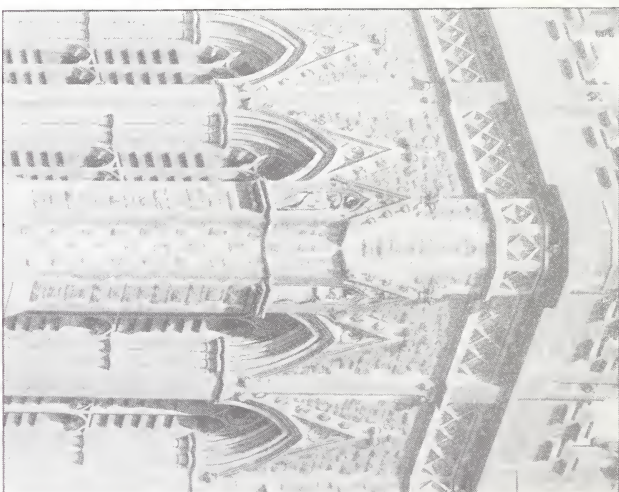


Fig. 18.

EXAMPLES OF TELEPHOTO WORK

(*Vide p. 29.*)

M. Houghton.

Architectural Telephotography.

By MAURICE HOUGHTON.



HERE are many details about churches and the like which cannot be taken upon a sufficiently large scale with an ordinary lens, or require staging to enable the camera to be brought near to them. In these cases a telephoto lens is of very great use to the serious worker, and if he is bent on making photographs of a Record nature, it is almost indispensable.

Camera.—It is desirable that the camera should be of the long-focus type, although triple extension is not desirable, on account of the increased liability to vibrate. Vibration is the greatest trouble that has to be faced in telephotography, and as a more than usually heavy lens has to be used in conjunction with a camera at a long extension, the probability of movement during the exposure is considerable. A camera of the square bellows type is the best. It should have a good swing back, because the camera will often have to be tilted from twelve to twenty degrees. The stand must be very rigid, as the slightest vibration will quite spoil a telephotograph.

Plates.—Always use chromatic plates of a medium speed, and have them backed.

Focussing.—On account of the poor illumination, a focussing glass is absolutely necessary. The ground-glass screen should have in the centre, an ordinary microscope cover glass, cemented to it by means of Canada Balsam, with a fine hair stretched across the cover glass. The focussing glass is adjusted till this hair is in focus, and then is used to determine whether the portion of the view included by the cover glass is in focus. Very exact focussing can thus be obtained.

Light.—Diffused light is better than direct sunshine, and subjects with a bright light behind them should be avoided.

Magnifications.—The rule for finding the magnification produced at a given camera extension is :—

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Divide the distance from the focussing screen to the back of the negative lens by the focal length of the negative lens, and add 1. For example:—

Focus of negative lens=2 inches. Distance from screen to back of negative lens=12 inches.

Then the magnification $\frac{12}{2} + 1 = 7$ diameters.

To find the F. value of the telephoto system:—

Divide the F. value of the positive lens by the magnification. For example:—

Magnification=7 diameters. Stop used in positive lens is $\frac{F}{7}$ Then F. value of the system $\frac{F}{7 \times 7} = F. 49$.

Exposure.—The exposure increases directly with the square of the magnification. For example:—if the exposure for a subject is $\frac{1}{2}$ a second at F. 32 with the positive lens, and by adding the negative lens, we get 4 magnifications, then the exposure will be $\frac{1}{2} \times 4^2$ or $\frac{1}{2} \times 16$, that is 8 seconds. This is an accurate method, but not very easy to work out in the field. The best way is to mark 4 or 5 extensions on the baseboard of the camera, say 8, 10, 12, 14, and 16 inches, and then make out a reference card, something like what is shown below, and fix it in the lid of our camera bag.

(For a telephoto combination, having a negative lens of 2 inches focus).

Camera exten., in inches.	8	10	12	14	16
Magnifications.	5	6	7	8	9
Equivalent Aperture at F. 7 in pos. lens.	<i>f/35</i>	<i>f/42</i>	<i>f/49</i>	<i>f/56</i>	<i>f/63</i>
Do. at F. 10 in pos. lens.	<i>f/50</i>	<i>f/60</i>	<i>f/70</i>	<i>f/80</i>	<i>f/90</i>
Do. at F. 15 in pos. lens.	<i>f/75</i>	<i>f/90</i>	<i>f/105</i>	<i>f/120</i>	<i>f/135</i>
Do. at F. 22 in pos. lens.	<i>f/110</i>	<i>f/132</i>	<i>f/154</i>	<i>f/176</i>	<i>f/198</i>

Subjects for Telephotographs.—All our cathedrals and many of our churches and abbeys contain much detail work; gargoyles, statues in niches, corbels, and the like, which cannot be taken with an ordinary lens on account of their position. Take for example, the Bell Harry Tower of Canterbury Cathedral, which is probably one of the most perfect structures that Gothic architecture, inspired by the loftiest purpose that ever stimulated the work of any art, has produced. The ordinary photograph gives a very good general idea of the whole, but to understand what marvellous detail there is in this work, one has to employ telephotography. Or again, look at the modern tower of St. George's Church, Beckenham, Kent. (See Figs. 16, 17, 18.) Gargoyles and corbels form interesting pictures, many of them taking very grotesque forms. The capitals of pillars, statues in niches, pinnacles, and parts of flying buttresses all make effective studies, and are quite out of the reach of any ordinary lens; but yet are surely well worth the taking, even though they be only as a record.

Points to Remember.

- 1.—Use a spirit level, and see that the back of your camera is upright.
- 2.—Take your time when focussing, and make sure you have got your picture sharp.
- 3.—Be careful not to shift the camera when pulling out the shutter of the dark slide. A very slight movement will take the subject out of the field.
- 4.—Be careful, when taking off the cap, not to set the camera vibrating.
- 5.—Don't be afraid of giving a full exposure. Over, rather than under-expose.
- 6.—Use backed orthochromatic plates; and when developing aim at getting good "contrasty" negatives.
- 7.—Make a few trial exposures on the same subject with the same stop, and compare them. You will then soon learn what exposure to give.
- 8.—Don't be disheartened because your first attempts are poor. Try again on the same subject until you do get a good one.

Photography as an Aid to the Antiquary.

By T. KIRKWOOD HACKETT.



IN no subject are copious notes and records a greater necessity than in antiquarian research. It is almost impossible to do without reproductions in some form or other of the objects under consideration. Time is saved and laboured verbal descriptions are avoided.

For this purpose three methods are available—(a) Sketches; (b) Measured Drawings; (c) Photographs. The first two, however, demand special training and considerable time to produce adequate results.

When we invoke the aid of the camera we find that, given a sufficient knowledge of the rudiments of the art, we can produce accurate reproductions of the work under consideration in a minimum of time. We have the further advantage that by enlarging we can produce our records of any desired size, and can also multiply copies with ease.

Size of Camera. In choosing instruments for work of this class the first point to be considered is the size of the camera to be used. It seems to have been an accepted axiom in purely photographic circles that record work on any size less than whole-plate ($8\frac{1}{2} \times 6\frac{1}{2}$) is useless. To this I must respectfully demur. Professor W. Flinders Petrie, in his little work on "Methods and Aims in Archæology," says: "The time and work of using whole-plate size are scarcely ever repaid by the results for *practical* archæology."

The questions of portability and expense are also very vital ones. When frequently moving from place to place in connection with the work the difference in weight between quarter-plate and whole-plate will be appreciated.

Cost. Again, the cost of the initial equipment in whole-plate size outfit is about three times that of a quarter-plate, while the necessary plates and papers are at least four times

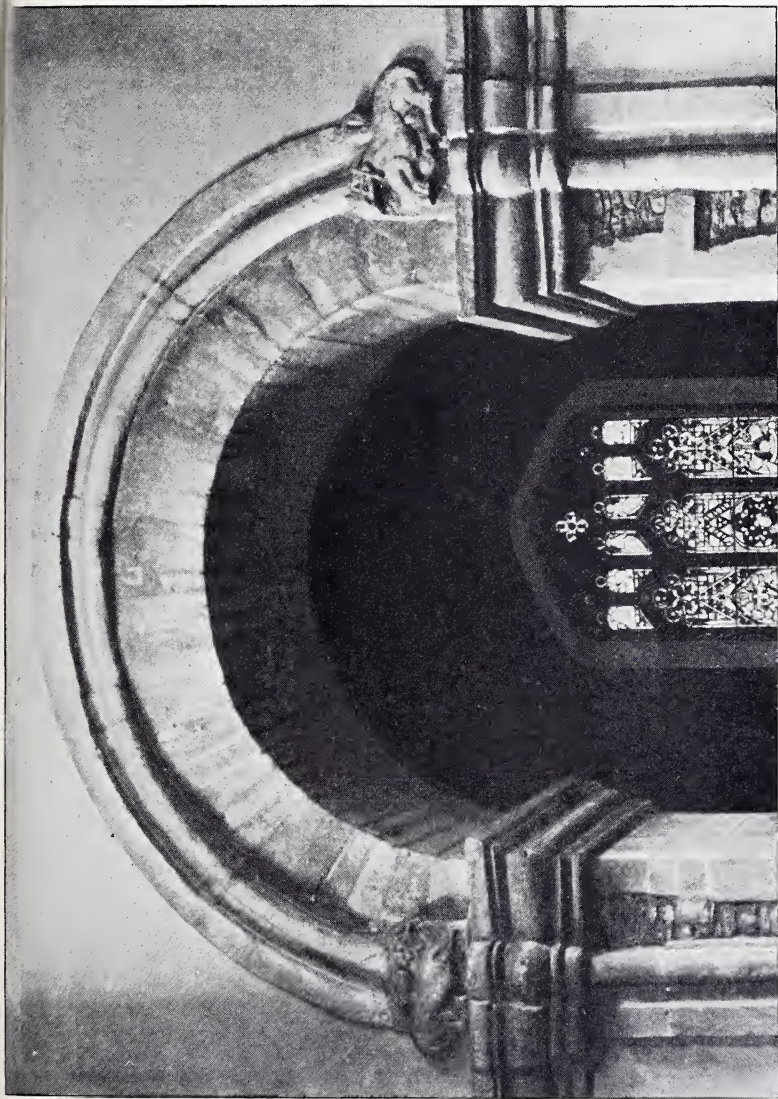


Fig. 19.

SAXON ARCH.

(*Vide* p. 51)

F. C. L.

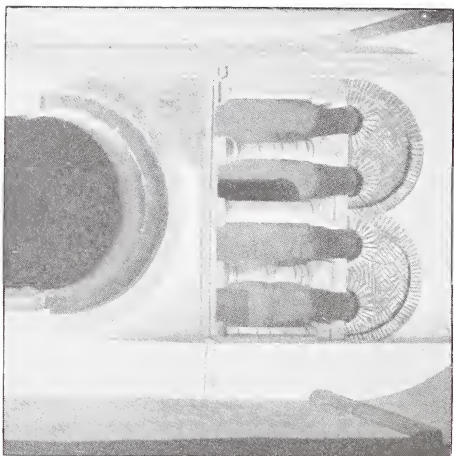
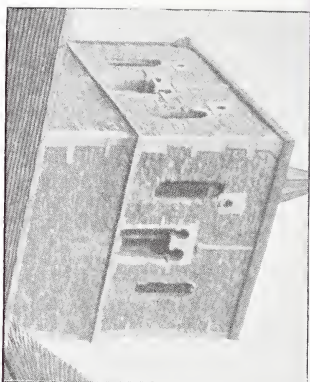


Fig. 21.



Fig. 22.

SAXON DETAILS.

(Vide p. 51.)

F C. L.

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as much. Also with a small camera the worker has the power of reproducing small bits of detail on which he might hesitate to use a large-sized plate.

The Camera. The camera selected should be of a strong, well-made pattern, possessing all the necessary movements of swing-back, rising and falling front. A very long extension should be regarded as a *sine qua non*, not only for telephotographic work, but also for use when copying small objects "life-size." The stand should be of a strong, rigid type.

Lenses. As most archæological work is done with a small stop, the more expensive anastigmats are not necessary, and a good type of R.R. lens will be found quite as useful.

For work with a $\frac{1}{4}$ -plate camera I would suggest R.R. lenses of 5 and 7 inches equivalent focus, and a wide-angle Rectilinear lens of $3\frac{1}{2}$ -inch focus. A telephoto attachment will be found a most useful addition when dealing with small details at a height or at a distance.

Minor Apparatus. In connection with the latter, a ball and socket head for the tripod or a tilting table will be found of great value. It is necessary to have levels fitted, and in practice I prefer T shaped ones to circular. A compass which may be small enough to hang on one's watch chain will be found to be useful. No careful worker will start out without an exposure note book and an exposure meter.

Scale. The value of reproductions of archæological detail is greatly enhanced by the inclusion of a scale. A very excellent one is issued by the Society of Antiquaries at a small cost, but if an ordinary two-foot rule is introduced into the picture in an unobtrusive position, and in the same plane as the principal object, the same purpose will be served.

Artificial Light. It is frequently necessary to obtain photographs of details in dark corners, and in these cases artificial light of some kind must be used. Magnesium ribbon is extremely useful for objects which lie all in one plane, but

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where there is any depth of focus it has but little penetrating power. When it is used it should be burnt in somewhat unequal lengths on each side of the camera, care being taken that the lens is shaded from the actual light. I have found in a very dark corner that 30 inches at $f/11$ gave a fully exposed negative. I have experimented with pure magnesium powder in several different flash lamps, but owing to their lack of portability or other causes, I have found them unsuitable. I have satisfactorily used a certain flash powder that is simply shaken together to mix, poured into a little tin tray and fired by means of a bit of touch paper. It gives an almost instantaneous and brilliant flash and leaves very little smoke, and is of great penetrative power.

Map or Plan. A very careful study of the plan and history of the place or object to be photographed should be made before arriving on the scene of operations. Indiscriminate work is worse than useless. In working in such buildings as a cathedral, church or abbey, a rough plan should be first made and the point of view as well as the location of each part shown, marking on it with a number which corresponds to that of the exposure in the note book.

This will be found specially useful if it be included when making up a collection of the prints of that particular place.

Lighting. When photographing details like piscinæ, etc., which may be unequally lighted, a white screen will equalize the illumination. A newspaper opened out may be used as a makeshift, and on one occasion I have used a tablecloth with excellent results.

In work of this nature it is best to use a fairly small stop ($f/32$) if time will allow. This is necessary if our negatives are to be subsequently enlarged. Professor Petrie recommends a stop ($f/100$) to be always used, but it must be remembered that this is for outdoor work under a tropical sun.

When photographing out-of-door objects bearing carving in low relief which it is required to show accurately, the lighting must be very carefully

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considered. Direct front lighting gives a flat result. Side lighting should be chosen so that proper relief is given to the carving. Time and an unlimited capacity for taking pains alone will ensure success in this branch. Those of my readers who wish to see a model of investigation in this class of work should study the late Miss Margaret Stokes' work on "Durrow and Castledermot Crosses."

Her negatives were made on quarter-plates, the proper lighting having been obtained. In some cases stages were erected to get details. Then 12×10 bromide enlargements were made and the subject revisited. The pictures were then touched up with Indian ink and Chinese white, and the final negatives made from them.

Brasses. Brasses are much better reproduced by photography than by rubbings. An extremely handy camera was designed for the purpose by the Rev. Walter Marshall, but it is not, I think, on the market. It is of lantern-plate size, fitted with a 3" Cooke lens, and is of the fixed focus type. A table shows the exact space included when the camera is fixed at a selected height.

Carving. In dealing with carvings, such as bench ends and poppy heads, considerable trouble will be experienced with the lighting, and a background and reflector will often be necessary.

Fonts. Fonts will nearly always require artificial lighting on some side, and here a safe flash powder is preferable to magnesium ribbon, as the latter is liable to splutter and burn anything it falls on.

The best method of storing prints is to mount them on suitable sheets of thick tinted paper and store them in portfolios, which should be carefully indexed. If preferred, these sheets may be roughly bound up in the manner described in No. 4 of *The Practical Photographer*.

Printing. If our prints are designed for deposit in a record collection, absolute permanence is required.

Architectural Styles, and How to Distinguish Them.

By E. W. HARVEY PIPER.



THE chief charm in the study of an old building is the ability to read its history by scanning its architectural features and noting its details. The power to give an approximate estimate of the date of a church or cathedral, to pronounce decisively on the period when an alteration or addition was made, and to suggest the probable reason for the change, is not difficult of attainment, and a rough and ready appreciation of the great styles can soon be acquired with a little application of the general principles of constructional evolution, and a comparative study of examples.

First Impressions

will, however, often need re-adjustment or modification by the consideration of whether the edifice under examination is situated on what was in the middle ages a main artery of traffic, on a navigable stream or in a port or harbour, or if the structure was, when being built, in a backwater remote from the tideways of large centres of population. In the latter case the treatment is not infrequently carried out in a style that lags a generation or so behind that then prevalent in localities more nearly abreast with the times. The crude forgeries of the restorer of a generation since have also to be watched for and guarded against—it is disconcerting, after confidently pronouncing a window to be an excellent example of Decorated tracery executed in 1345, to hear the old sexton explain to the friends who have accepted you as guide that he helped to work the sunk chamfers on them mullions for old Briggs, the builder, well nigh fifty years ago, and that he wrought the mouldings from drawings done by a young man sent down from Scott's office in London.

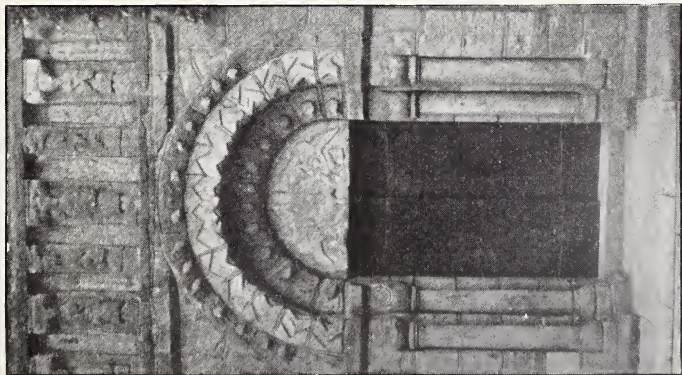


Fig. 23. C. Gresty.

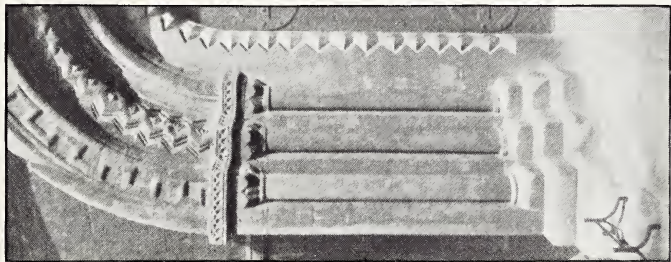


Fig. 24. NORMAN PERIOD.
(*Vide* p. 52.)

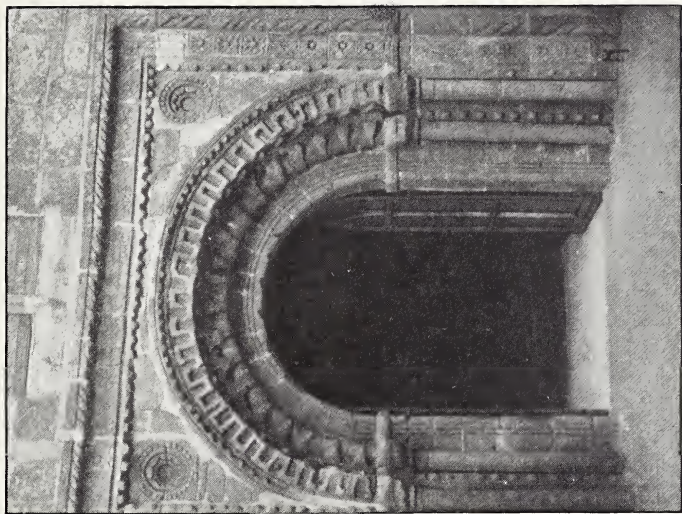


Fig. 25. Miss Evans.

Fig. 27.

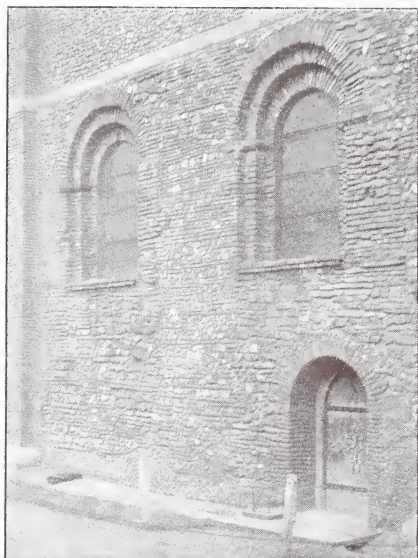


Fig. 28.

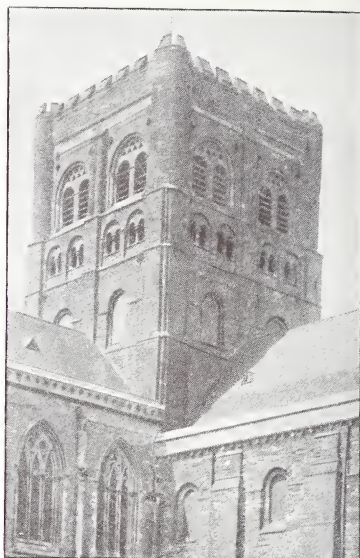


Fig. 26.

NORMAN PERIOD.
(*Vide p. 52.*)

F. C. L.

Modern Work. To the experienced eye, an indefinable but obvious tameness, a smoothness and mechanical regularity, a want of spirit and "go," all betray the modern restorationist's work, but even the seasoned architectural student is "caught napping" sometimes. "If I were you, I shouldn't trouble to sketch that bratticing in detail," suggested a bystander to an architect's pupil who was making a measured drawing of Bishop Bronescomb's tomb in the Lady Chapel of Exeter. "And why not?" sharply retorted the youth, intent on gaining the Pugin Medal, "I consider it one of the finest bits of Late Thirteenth Century detail in the cathedral." "Only because I did the whole of it myself when the tomb was repaired five years ago," replied his adviser, a well-known sculptor in the "ever-faithful" city.

We propose in this paper to confine our attention to the architectural styles in vogue in this country during the middle ages—those comprised in what is popularly known as the Gothic period, and to which all the monastic and ecclesiastical buildings erected after the Conquest and before the Reformation belong. We shall endeavour to indicate to the lay reader how he may roughly differentiate the art of one period from another.

Four Styles. These styles are broadly divided into a series of four, which imperceptibly merge the one into the next by a natural and easily-identified gradation. The sequence of architectural fashions is not an arbitrary theory, but is a logical evolution, capable of demonstration by innumerable dated documents and historical records, and is as strictly chronological, as clearly defined, and as well ascertained as the succession of geological strata, or the unceasing cycles of changes in the modes of ladies' attire.

I.

The great architectural styles may, perhaps, be the more readily recognised and remembered if we compare them to the four seasons of the year.

Winter in such an architectural calendar will be represented by the Saxon and Norman periods—the former may be regarded as corresponding to

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the November, the latter to the December and January of our almanac of edifices.

Saxon Period. Although the work of the later Saxons hardly comes within our present scope, some passing reference to its characteristics will indicate how it influenced and paved the way for the more refined art which followed. The remains of Saxon buildings are necessarily scanty, but are, as Professor Baldwin Brown of Edinburgh has recently shown, more numerous than was realised thirty or forty years ago. Most of the Saxon edifices still existing are village churches erected during the earlier two-thirds of the eleventh century. The construction is rude and the materials are rough. The churches are small and low aisleless edifices, constructed of rough rubble masonry, but the angles of buildings and openings to windows are of squared ashlar, arranged alternately as long and short stones. The towers, like the bodies of the churches, are without buttresses, and may have on the centre of each face flat and upright strips of projecting masonry set as pilasters by way of ornament. The windows are small, either round or rectangular openings, sometimes with masonry above arranged as an isosceles triangle, and a singular feature reminiscent of Roman work is the use of turned balusters of stone for mullions between the lights. The internal columns in the churches are squat tiers of drums, squared blocks of stone, above and below, representing the capitals and bases. The mouldings and other decorative features are hewn on the stone with the axe, the chisel not being then employed as a tool. Among the best known examples of Saxon work are the churches of Bradford-on-Avon, Wilts; Brixworth, Barnack, and Earls Barton, Northamptonshire; Deerhurst, near Tewkesbury; and those of Sompting and Worth, Sussex.

Norman Style. January and February in the wintry days of art are aptly represented by the massive and uncouth works executed in the Norman style. This phase of architecture was introduced soon after the Conquest, and pre-

ARCHITECTURAL STYLES, AND HOW TO DISTINGUISH THEM.

veiled during a hundred and twenty years, merging into the succeeding style at the beginning of the reign of Henry III. Thanks to our comparatively tranquil history as a nation, work of the Norman period is very abundant in this country, not only in our great Minsters, but in innumerable country churches scattered all over the land. The mode of construction is wasteful and unscientific, the walls consisting of needlessly thick masses of masonry, often resting on poor foundations, without footings over which to spread the weight, and there is little pretence at bonding the stones together. There is evident throughout a lack of knowledge of the theory of thrusts and stresses. The whole is "strong with the savage splendour of rude walls," as Wyke Bayliss has observed. The window openings are deeply splayed. The most obvious feature of this Norman work is the use of the round arch for the heads of windows and doorways. In the earlier work, that executed before the close of the eleventh century, carving is very sparingly employed, the arches are quite plain and the capitals are cushion shaped, the intention being either to decorate them with colour and gilding or to carve them *in situ* at a later period. Thus, in the western portion of the crypt of Canterbury Cathedral, constructed by Prior Ernulph, c. 1100, some of these "cushion capitals" still remain, having one or two sides ensculptured with interlacing ornament or grotesques, the other surfaces being perfectly plain. As the style advances, and craftsmen gain dexterity and experience, the work becomes lighter in construction, an increasing richness of carving is apparent, the chisel replaces the axe as a mason's tool, and the joints in the masonry, at first wide and gaping, are set so closely that a knife cannot be inserted between the stones. The last mentioned constructional detail is probably the most reliable means of distinguishing a building of the eleventh century and one of the twelfth century.

Norman Plan. The plan of a Norman church shows marked development from that of the Saxon days. Instead of the two rectangles placed end to end of nave and chancel, we

find aisles thrown out on either side, shallow transepts projecting at the crossing, and frequently the short choir terminates eastwards in an apse, around which a passage runs. This is still the case at St. John's Chapel in the Tower of London (a typical example of an Early Norman building), St. Bartholomew's, Smithfield, and the Cathedrals of Norwich, Gloucester, and Peterborough, but Norman apses since destroyed in the rage for lengthening and rebuilding choirs, formerly existed at Ely, Durham, Lichfield, St. Albans, and many other of our great Minsters.

The Nave.

The naves of churches were at first covered with flat wooden ceilings, as at Peterborough and St. Albans, and at a later date were roofed over with circular vaults, the side aisles being finished with plain vaulting having no ribs. These roofs are carried by round arched arcades supported in turn by low and broad piers, either rectangular or octagonal. Where columns are employed they are round, with a square abacus, like a flat tile below the capital. At the Cathedrals of Norwich and Durham, and the Abbeys of Lindisfarne and Waltham, some of the columns are carved with fluting, diagonal and zigzag sculpture, which has in its setting out no relation to the joints of the masonry. The windows are narrow and deeply splayed, the doorways much recessed, with advancing orders on either side, which in later examples is exceedingly rich. Over the flat lintel is a semi-circular arch, and the space between a tympanum is often filled with bold figure carving, frequently as in the well-known Prior's doorway at Ely, representing our Lord in Majesty. Fig 15. A great variety of ornament is employed in mouldings, including the chevron, the billet, the nail head and double cone.

Decoration.

A favourite method of surface decoration is to panel over a wall with a series of flatly carved, round-headed arches on pilasters. Springing from the centre of each opening, a second sequence of precisely similar pilasters, with circular archways above, is carried along, the two sets of arches intersecting at equal

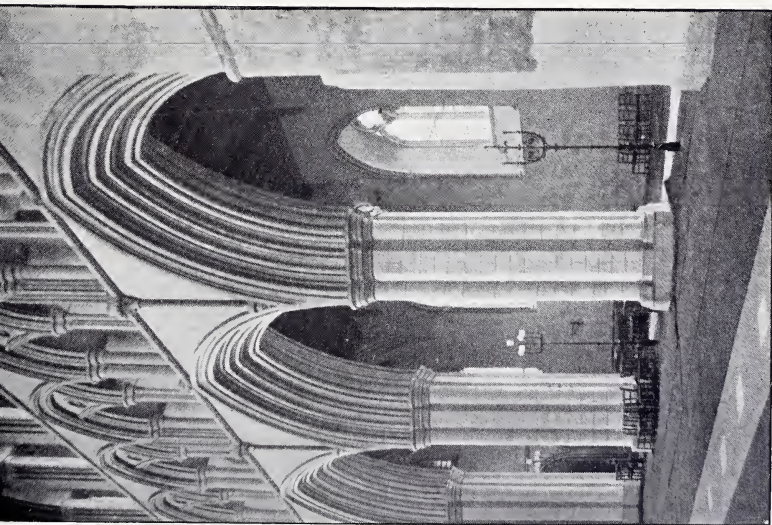


Fig. 29.

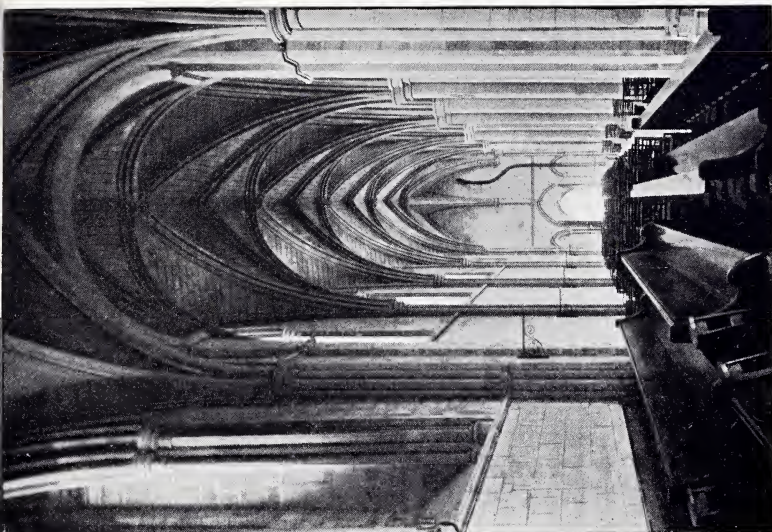


Fig. 30.

EARLY ENGLISH PERIOD.

(*Vide* p. 52.)

F. C. L.

Fig. 32.

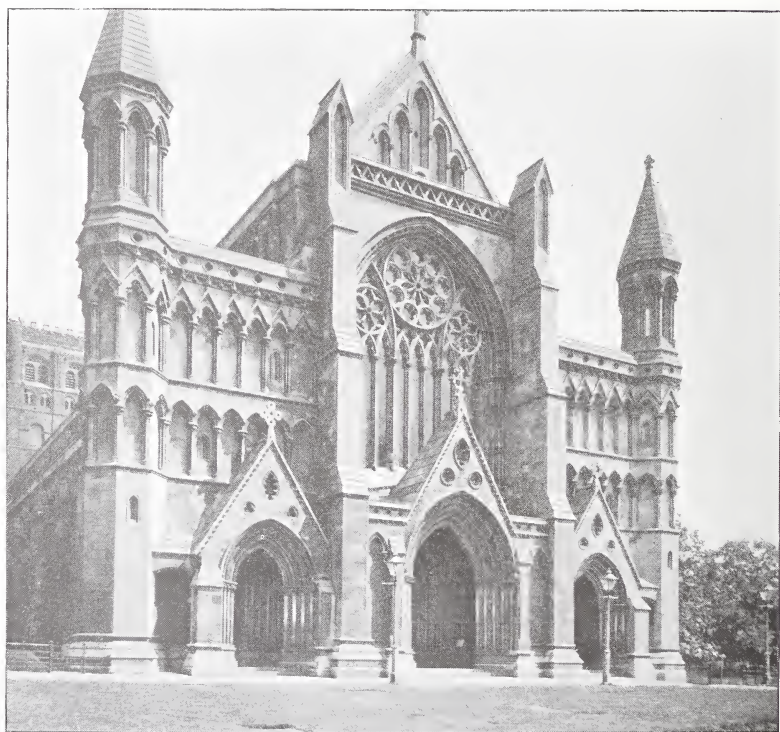


Fig. 31.

F C. L.

EARLY ENGLISH (MODERN.)

(*Vide* p. 52.)

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distances as a range of acutely-pointed arcading. This was formerly imagined to have been the origin of the pointed arch, but the idea is far-fetched and historically is as untenable as Charles Lamb's quaint suggestion as to the origin of roast sucking pig.

Examples. Perhaps the best examples of Early Norman, accessible to Londoners are the Keep of the Tower with its chapel, already named, and the central tower of St. Albans. Of the Middle period of this style the transepts of Winchester, Norwich, Ely and Peterborough Cathedrals, and the central and lower portion of the west front of Lincoln, are typical. Of the latest and richest, or Transitional, phase of Norman the naves of Norwich, Ely, Peterborough and Durham Cathedrals, St. Bartholomew's, Smithfield (much restored), and the churches of Iffley, Adel, Kilpeck and Barfreston may be cited. Work of a lighter type is to be seen at Gloucester Cathedral and Tewkesbury Abbey, both of which have in the naves circular columns more stilted and slender than any coeval ones elsewhere; and work of a still more advanced character is to be seen in the chapter-houses of Bristol and Gloucester and the choirs of the Augustinian priory churches dedicated to Christ at Oxford and on the Hampshire Avon.

The main reasons which governed the evolutions of the later styles from the Norman were two—the persistent attempts, made with growing success, to improve the admittedly bad lighting of earlier buildings, and the desire to substitute for clumsy masses of masonry in walls and vaults more scientific methods of sustaining the weight and thrusts by providing counterpoises and thickening only those portions of the fabric on which the stress comes.

II.

Early English Style. The joyous spring-tide, with its lightness, buoyancy and half-revealed promise of further development into luxuriant foliage, blossom and fruit, is a fitting symbol of the second phase of our national architecture. It has been christened the Early English style, although the terms Thirteenth

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Century, Lancet and Pointed have also been applied to it. This elegant and refined mode flourished during nearly a hundred and twenty years, from the closing days of the reign of Henry II., in 1187, until the troublous end of the rule of Edward II., in 1307. The style possesses all the vigour of early manhood, all the purity of dawning womanhood. No longer massive, flat-featured and clumsy, the work of this period is marked by a severity, a freedom and a chaste beauty never equalled before nor since, and a refined regard for proportion in the masses and voids which delights and satisfies the eye.

Important Differences.

The radical and most easily noted difference between the Early English style and the last, is the substitution of the pointed for the semi-circular arch, giving to the whole treatment a vertical tendency. Thirteenth century art is truly "tip-tilted like the petals of a flower." The openings for doors and windows are now tall and narrow; the buttresses are bold in their projection, and are crowned by pinnacles, and the roofs are steep-pitched. The vaulting is in oblong in lieu of square compartments, and the weight of vault and roof on the buttresses induces the builder to plan the wall between as a mere webbing or screen. The proportions are more slender and aspiring. Internally, groups of detached shafts of Purbeck marble, banded across at intervals, support ranges of pointed arches. The windows, at first very plain, are presently arranged in pairs and triplets, and are splayed widely, and by degrees the piercing of the spaces above and between the groups leads to the development of tracery. The mouldings are no longer cramped and square, but are carved on sloping surfaces and carried along in bold sweeping lines, with a free alternation of rolls and fillets, and deeply cut hollows. A characteristic ornamentation for these concave mouldings is a projecting four-petalled flower, with depressed points to petals and raised centre, absurdly named the "dog tooth" decoration. The earlier capitals and bases consist of a series of deeply hollowed rings resembling up-turned bells, but at a later period stiff and crisp foliage, curled up like budding

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fronds of brake fern or celery, is profusely employed for capitals, bases and crockets.

Examples. To this Thirteenth Century period belong the choir, transepts, and eastern bays of the nave of Westminster Abbey, and also its chapter house; Salisbury Cathedral, with the exception of its spire and chapter house; the presbytery and galilee forming the eastern and western extremities of Ely Cathedral; the chapter houses of Oxford and Chester; the choirs of Lincoln, Southwell, Rochester, Pershore and St. Saviour's, Southwark; the north transept of York Minster, and innumerable parish churches.

III.

Decorated Style.

The blazing noontide of summer in English art is like its prototype in nature, the most short-lived and brilliant of our seasons. The extreme duration of this period in Gothic architecture, generally known as the Decorated or Fourteenth Century style, is comprised within the seventy years of the reigns of the Second and Third Edwards, 1307-77. Its main characteristics are an evergrowing freedom and richness of ornamentation evinced in every detail, and an exuberance especially displayed in the treatment of vaulting ribs and window tracery. The first signs are apparent of that attempt to clothe construction with applied decoration, which ere four generations had passed away stifled and choked all progress.

Striking Features.

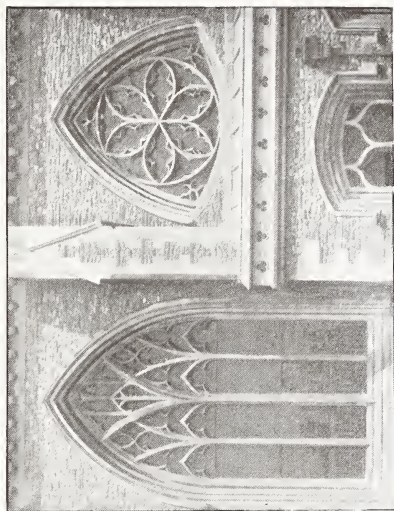
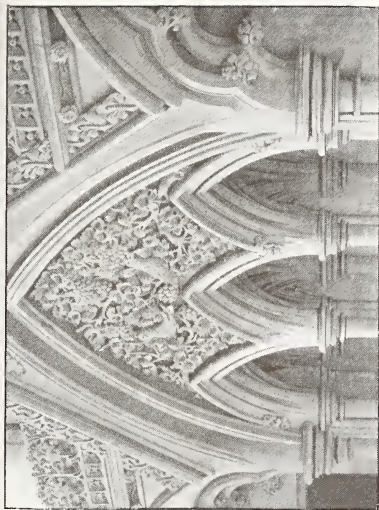
The most striking features are the wide spacing of bays, the broadening of all arched openings, and the improvement of the lighting. Clerestory windows are made loftier, wider and more numerous, until the intervening stonework becomes almost perilously slender. Another and more daring constructional experiment is tried at the very end of the thirteenth century. The side aisles are greatly increased in height, so as to allow of raising the piers and arcades, and thus the triforium gallery, and even the clerestory is in some cases, as at Bristol Cathedral, dispensed with. One advantage gained by this mode of construction is to afford a

fresh means of providing for the thrust of the stone vault, not with flying buttresses and external piers, but by bringing into play the contra thrusts of vaults thrown over the aisles, these being saved from sliding outwards by a series of deep buttresses, weighted with pinnacles, or as at Norwich with apostles' statues. The groining ribs, which in the Early English style accentuated the meeting places of different planes of vaulting, are now developed into a spider's web of ridge and lierne bands, and the panelling between these ribs is reduced to a thin connective tissue of clunch stone or chalk. The widened windows are divided by upright bars or mullions into several lights, and the heads are filled with varied tracery, flowing, reticulated or geometrical patterns being adopted for adjoining windows that have evidently been executed simultaneously. The doorways are less deeply recessed than in the preceding century; roofs are lower in pitch, and the clustered shafts in piers are no longer disconnected, the whole group being cut out of a single stone. A profusion of diaper and other carving is introduced, and there is direct copyism of flowers and foliage, the sculptor's *motif* being naturalesque and no longer stiff and conventional.

Examples. Examples of this Decorated style are, owing to the short time during which it was prevalent, less common than instances of the other three periods. The chapter house and choir screen of Southwell, Alan de Walsingham's matchless Octagon and Lady Chapel at Ely, the Abbey Gate-house at Bury St. Edmund's, the choir of Bristol, the Percy Monument at Beverley, and the east windows of Carlisle and Selby may be specially noted.

IV.

Perpendicular. A glorious autumn, in its coarse magnificence giving tokens of approaching decay, marks the fourth and latest period of English Gothic, that recognised as the Perpendicular or fifteenth century style, and although the glowing hues of sunset but prelude the coming extinction of the art in a night of classic formalism, its latest phases are of great richness, and have a



F. C. L.

Fig. 35.

DECORATED PERIOD.

(*Vide p. 54.*)

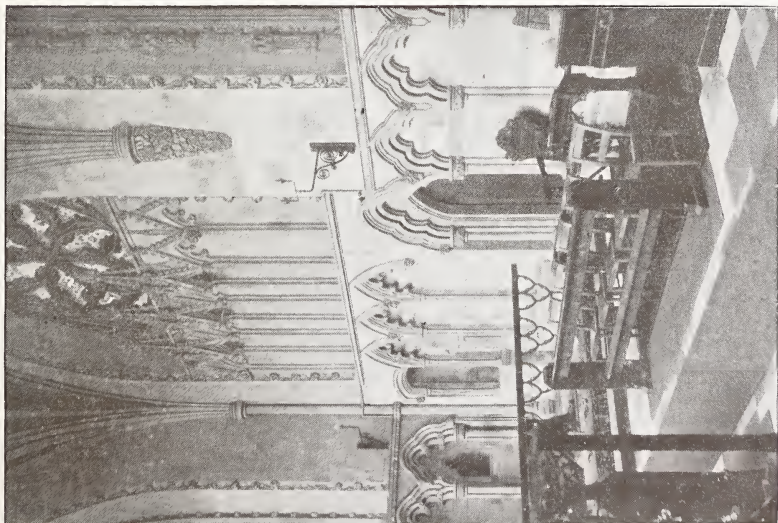


Fig. 33.

Fig. 36.

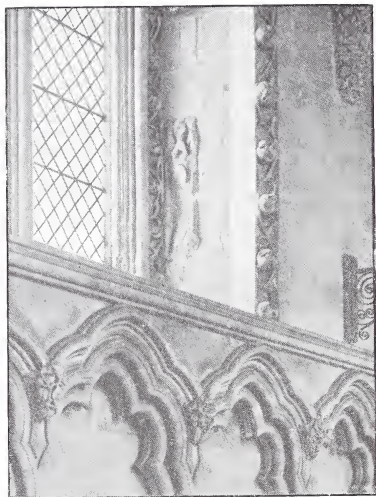


Fig. 37.

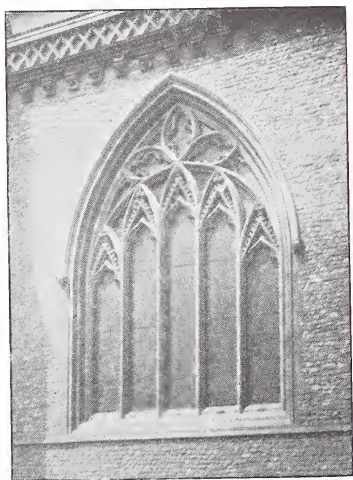
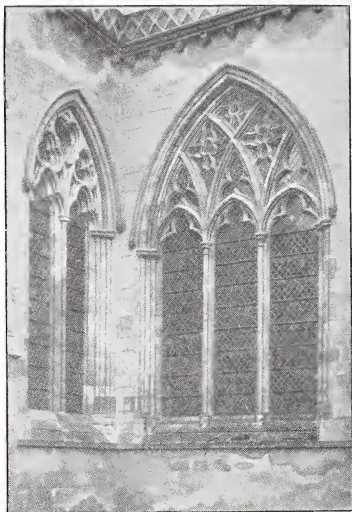


Fig. 38.



Fig. 39.

F.C.L.

DECORATED PERIOD.

(Vide p. 54.)

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grandeur and an originality of their own. So self-sufficient have our craftsmen become that this culminating effort of our architecture is essentially an independent and insular art, national and distinctive in character, and without parallel on the continent. This Perpendicular style held sway during one hundred and thirty years, from the days of Richard the Second to those of Henry the Seventh inclusive.

Characteristics. A tyro in architectural knowledge will readily distinguish fifteenth century work. The depression in all the arch openings, begun in the Decorated period, rapidly develops until the heads of arches are first obtusely pointed, then struck from four centres and finally enclosed under a square head. There is a tendency to transfer all the weight of walls and vaults from internal piers to outer buttresses. But the dominant note is struck by the verticality and growing horizontality of all visible lines, alike in construction and in ornamentation. Window mullions are carried the full height, are thickened and crossed by heavy bars or transoms, until, in the great west windows, with which the more modest earlier ones are replaced in most of our cathedrals and large churches, the stonework becomes a mere gridiron for the display of rectangular panels of painted glass. Wall surfaces and even the blocked up and squared triforia spaces are treated as grounds for skin deep panelling, the roofs are wider, lower, and carried by hammerbeams. The mouldings are wide, shallow and coarse, and the motif for foliage has again reverted to conventionalism of a mechanical type. Carved woodwork is at its best, and screens, stalls, misereres, canopies, and the poppy head ends of benches, provide the sculptor in oak with opportunities for full and vigorous work, too often irreverent and even coarse in its humour. Decoration becomes trivial and stales by repetition, and gradually the work, although admirably executed from a technical view point, sinks into the mechanical and commonplace.

The debasement of our art is accelerated by the Renaissance and by the loss of the old religious

fervour, and Gothic architecture slowly dies out with a long drawn out but ineffectual spluttering among the embers.

Examples. Examples of Perpendicular art abound. The earliest dated work is that in the south transept of Gloucester, but the choirs of that cathedral and those of York Minster and Cirencester Church recur to us all, while notable experiments in veneering Norman structures are the nave of Winchester and the choir of Norwich. In the case of the latter cathedral, which is not so familiar as William of Wykeham's work, one of the latest and most careful architectural writers dwells lovingly on the "daring engineering feat," involved in supporting the massive Norman walls of triforium and clerestory, while the builders of the fifteenth century renewed in their own style the piers below, whereas close study of the cathedral choir at Norwich since the recent cleansing from colour wash will show unmistakably that "substantial Perpendicular masonry" is but a dexterous casing of the Norman with stones at most $2\frac{1}{2}$ inches in thickness.

We have endeavoured to indicate to the architectural photographer in the most concise manner some of the constructional and decorative principles which underlie the successive changes in architectural fashions, but these changes were also largely influenced by religious symbolism, the rivalry of priests, monks and laity, the struggles of contending monarchs and barons, and other motive forces which it has not been possible to enumerate in a short paper. We trust enough has been said to excite the interest and whet the appetite of some who had not previously given the subject much attention.

A Comprehensive Example. The amateur may also be reminded of a great historic building easily accessible from London in which every period of mediæval architecture from Saxon to Tudor is represented—the church of the mitred Benedictine Abbey of St. Alban. Here the beginner will find useful practice in essaying to discriminate between the various styles and works of many dates, often harshly clashing with each

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other in juxtaposition. Here, too, it will be a task of no great difficulty to detect the heavy hand of the Gothic revivalist in the amazing and amusing modern fronts at the west end of the nave, and to the north and south transepts.

The architectural photographer will add greatly to his enjoyment in the pursuit of his fascinating craft if he seeks to pick out the salient and distinctive features of the building he proposes to take, to ascertain the reason for the particular treatment and the approximate date at which it was executed. This habit of thought will enable him to preserve an impartial eclecticism, whereby he will perceive the interest and beauty of most of the work of every period and he will speedily adopt as his own the motto of Benedict Spinosa :

“Not to dislike, nor to like, but to understand.”

Pictorial Pointers for Architectural Photographers.

By FREDERICK H. EVANS.



TOO large a proportion of those who enter a cathedral armed with a camera and the Dean's permit not only have no definite idea of what they should try for, or even what they want to try for, but also have only a very indefinite idea as to how to set about it when they do begin to see things worth trying for.

General View.

Usually the first thing attempted is a view along an aisle or up the nave from the west door. The wrong way for this is that too-often-committed error of placing the camera right in the centre of the aisle or nave, by which means the perspective is made violent and exaggerated and a sense of real distance lost, though it was aimed at. The camera should be placed for the nave view as near one side as will just prevent the piers or pillars on the side nearest the camera from running into an indistinguishable line or wall. For the aisle the same rule applies, but before deciding to work from the extreme end of the aisle,

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as is often done, let the worker take his camera fully one-third along the aisle and note how much better a picture it makes, giving an ample sense of distance and length and gaining greatly in detail and value.

Arches.

In composing a picture great care should be taken that no unfinished or cut-through rounds of arches are included; they make ungainly and very dissatisfying arrangements. A pillar without at least a portion of its capital being included running up through a composition is to be avoided; the cut-off abruptness is most inartistic and worrying. If this cannot be done without otherwise spoiling the composition, see that an adjacent pillar, like it but *plus* its capital, is included. This will then show what the *minus* one would be like, and perhaps thus serve to further suggest height, etc.

Near Objects.

Nothing at all near the camera must be included in the composition, as distortion, or, more correctly, undue magnification, will result and prove very unpleasant. Always include as much floor or base to the subject as is reasonably possible; if too little is given, a cut-off or top-heavy feeling is suggested in the print—a want of balance and support to the composition is sure to result. If an arch is the main element controlling the composition, do not have too much roof over it, otherwise it will appear dwarfed and the subject lose symmetry.

Camera Vertical and Level.

Never start an exposure without having fully tested the camera in every direction with the spirit-level. Even if this has already been done, it is as well to go over it again just before putting the plate-holder in position, as some slight movement may have been made and so altered the level as to call for correction. If this is scrupulously seen to, any false lines in the composition can then be rightly attributed to the building itself. This will be the case often enough to make the most careful use of the level an inflexible rule.

POINTERS FOR ARCHITECTURAL PHOTOGRAPHERS.

Lighting. In choice of lighting, before starting an exposure make sure that there will be sufficient time for a full exposure before the special effect being tried for has passed away with the sun's movement round the building. It will sometimes happen that one starts an exposure too late, and before the shadowed parts of the subjects are at all properly exposed the moving of the sun has so changed the entire aspect of the scene (or the sun perhaps cruelly peeps through a window included in the subject, and so halates the whole), that the negative proves a failure. Do as little work in the middle of the day as may be. The sun is most nearly vertical then, and therefore makes all the shadowed portions darker than is easy to deal with. Charming effects are to be seen in the early and quite late hours—before nine and after five—but it too often happens that then the actinic power of the light is insufficient for a full exposure to properly realize the effect aimed at. Experiments, however, should be made in these hours as often as is possible.

Lenses.

It would be a good plan for the worker who desires pictures rather than views, to make at least one visit to a cathedral, and instead of the usual $5\frac{3}{4}$ -inch lens for his $\frac{1}{4}$ -plate camera, to take an 8 or a 9-inch lens, and compel himself to find subjects to suit it, and that will compose properly on his ground glass. The lesson will be a valuable one, showing how much more charming these "bits" will be as pictures, and as souvenirs of the visit, than the usual long length views up and down and across and across. If the only lens of that length that the worker possesses is the half of a shorter focus lens, let him not fear to use it though it be a single lens; no distortion need be feared, the great length of focus relative to the plate with which it is used will quite prevent any wrong lines at the sides. Few workers on interior subjects carry a sufficient variety of lenses. It is usually so difficult—often quite impossible—to alter one's point of view by moving the camera nearer or farther back. If a change of focus from the one usually used to one that exactly or more nearly fills the plate with the desired subject cannot be

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made, a great waste in trimming the print will ensue. For a $\frac{1}{4}$ -plate camera lenses of focal length from $4\frac{1}{2}$ to 10 inches should be carried, say, $4\frac{1}{2}$ —6—8—10 foci; with a 5×4 camera, the foci may be $4\frac{1}{2}$ —6—7—9—10—12. With these, all reasonable compositions can be made to fill the plate satisfactorily in one dimension, and of course it is but rarely the case that both horizontal and vertical dimensions can be got perfectly on the plate; trimming in at least one dimension must always therefore be necessary. For my whole-plate camera I carried 8-inch, 10-inch, 12-inch and 14-inch lenses, with the very rare use of $5\frac{1}{2}$ -inch for extra difficult subjects in very confined positions. With my 10×8 camera I use the same set, minus, of course, the $5\frac{1}{2}$ -inch lens, and plus a 19-inch single lens. The 14-inch is also a single lens, and I endeavour to use the 19-inch as often as I possibly can, as it is, of course, the golden rule in this aspect of our work always to use the longest focus lens that existing conditions will permit.

When adjusting the camera keep it as low as convenient. It should be remembered that artists almost always paint or draw from a sitting position, but most photographers take their pictures from as high an altitude as their tripod will permit. This is generally a mistake, at least in picture-making, and often leads to that extremely unpleasant aspect of the level floor being *apparently* that of a steep incline. Even when taking bits of detail, and height is necessary to avoid tilting and using the swing-back, let it be as little as possible. For it must be remembered that all carving in a cathedral was made to be observed from the floor, and not from a position on a level with it.

Exposure.

As to exposure, a safe rule for the tyro to adopt would be that whatever the exposure he may have decided on let him give exactly double, if he will not spend a plate on a lesson by giving two exposures on the same subject, one with the exposure decided on and one with treble that time.



Non-technical jottings on English Church Architecture.

By THE EDITOR.



WITH the hope of tempting the architectural photographer to become also a student of architecture, a step he will certainly never regret taking, we are here reproducing a few typical bits of English Church architecture.

These have been selected as far as our available space permit with a view to showing a few of the salient features of the various periods. It is very fortunate for Londoners that in the Abbey Church of S. Albans they may find Roman materials, and work of the Saxon, Norman, Early English, Decorated, Perpendicular and "Very Modern" styles. Therefore we have purposely selected the greater number of our examples from this building. We now propose to recapitulate in non-technical language the salient features of these five styles of English Church Architecture.

Saxon,

1000-1070 A.D.

Masonry often includes tiles built in among the stones and sometimes arranged in groups sloping one way and then at right angles in the manner called herring-bone. Fig. 21. Towers are square without buttresses. At the angles stones are set alternately upright and horizontal (long and short work). Figs. 19, 20.—Windows often triangular headed or formed of one large stone (Fig. 20) with "long and short work" round the opening (Fig. 20). Frequently a single stone shaft or "baluster" divides the window opening. Figs. 20, 21, 22.—These shafts may have the appearance of having been turned in a lathe. Doorways may be similarly triangular or round headed. The impost or stone from which the arch springs is usually a plain block, but may have rude mouldings. Figs. 19, 21, 22.—Sculptures are rare and somewhat crude. Fig. 19.—The carving tool being the axe. The chancel and tower arch (Fig. 19) usually show long and short work.

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Norman, 1070-1200 A.D.

The early work is usually plainer than the later work, but plain work is not always to be regarded as early Norman. The arch is semi-circular—at first flush with the wall, and later recessed (Fig. 27). Windows and door at first small (Fig. 27). Later are larger and richly ornamented (Figs. 15, 23, 24, 25, 26). Windows at first have only a single light (Fig. 27). The zigzag ornament (23, 24) is a very common form. But there are a large number of other forms also frequently met with. Figs. 15, 26 shows enriched style. Note the semi-circular (“tympanum”) carving over the door (see also Fig. 15). The piers are solid masses (left margin Fig. 22, right margin Fig. 29), which may be square, round or square recessed (Fig. 22). Arches also are often square-edged. Figs. 21, 22, 27.—Shallow arcading is common, like that in 26, now placed above the door. This arcading is usually near the ground, with a shelf or sill for seats. Capitals often cubical masses, perhaps with lower parts rounded or carved. Figs. 23, 24.—The base a squared stone, which may be chamfered or quarter-round, or slightly ornamented. Fig. 24.—Towers round or square. Fig. 28.—Buttresses have but slight projection and usually plane (Fig. 28) Porch usually does not project more than a few inches from the wall surface, but the doorway is recessed. Figs. 15, 23, 24, 25.—East end of church often semi-circular (apse).

Early English, 1200-1300 A.D.

The change from the solid substantial Norman style, with round arch and massive masonry, to the pointed arch and clustered shafts, seems to have been as rapid as it is different in character. General characters—Lightness, long narrow “lancet” windows, singly or in groups, bold projecting buttresses; high-pitched roof, pointed arches, supported by slender pillars. Figs. 29, 30.—Mouldings are chiefly “rounds,” and often deeply recessed, or angles cut with a chamfer. These give a bold light and shade effect. The so-called “dog-tooth” ornament is characteristic of the period. Fig. 32.—The ornament suggesting an ornate shepherd’s crook and called a “crocket” is

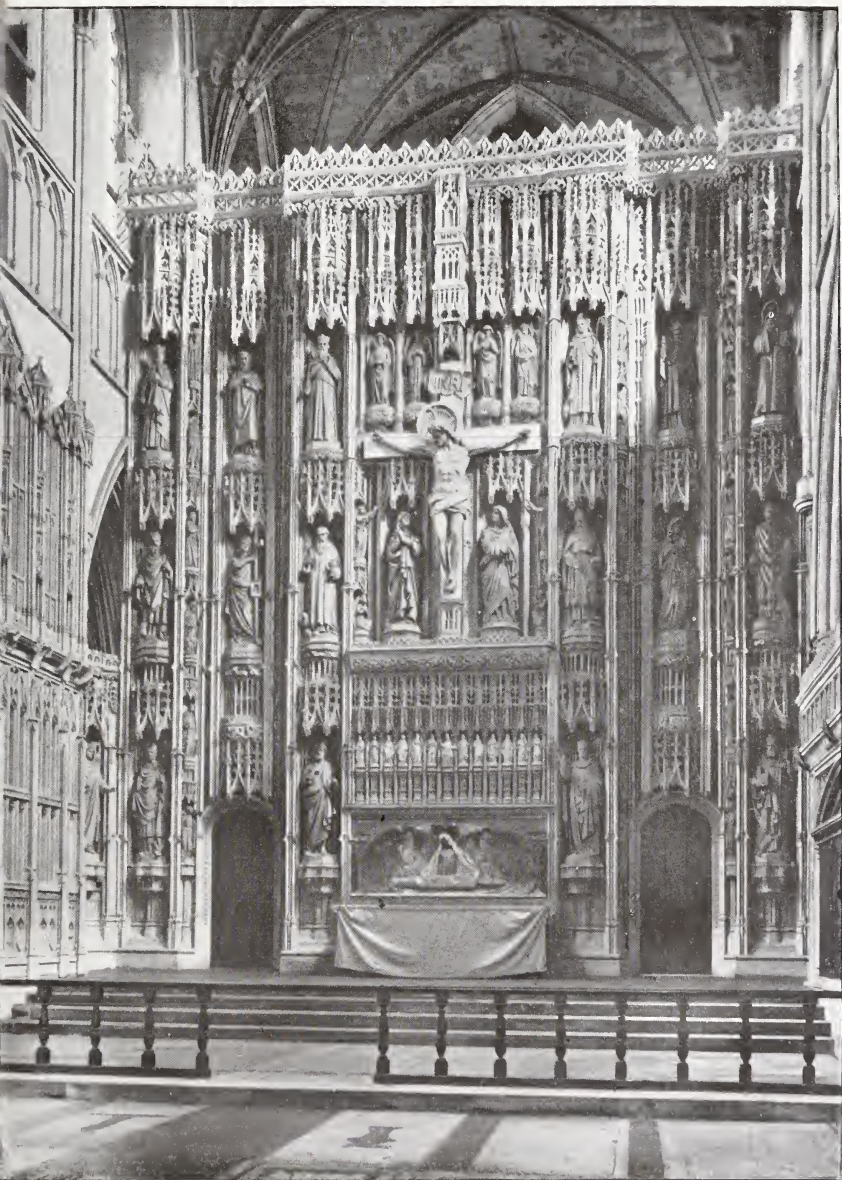


Fig. 40.

PERPENDICULAR PERIOD.

F. C. L.

(Vide p. 55)

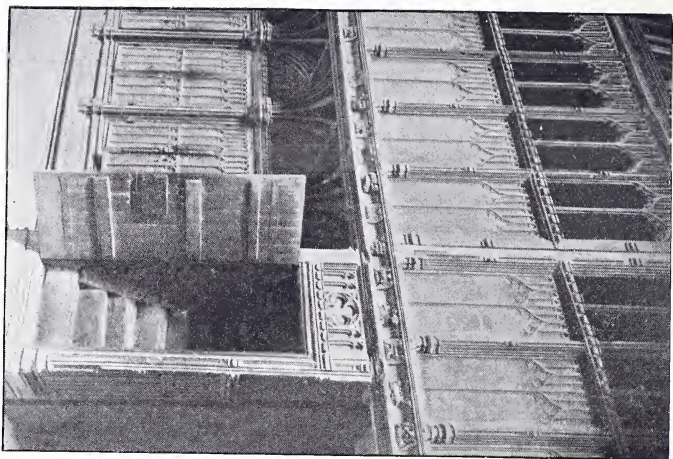


FIG. 41.

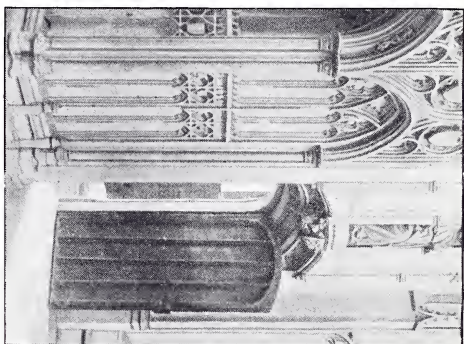


FIG. 42.

PERPENDICULAR PERIOD.

(*Vide* p. 55.)

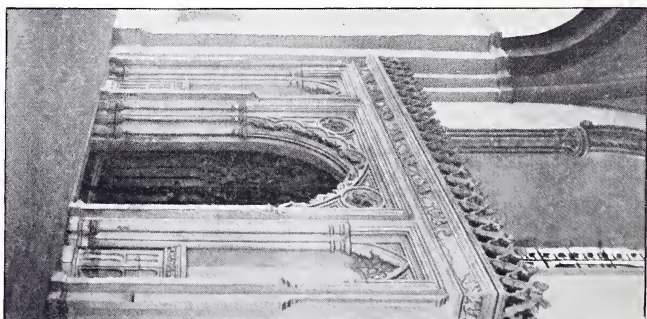


FIG. 43.

F.C.L.

also characteristic of the period, shown in Figs. 16, 18 and 57. The conventional foliage is shown in Fig. 32, and though used elsewhere is characteristically employed for bosses and capitals.



Fig. 56.



Fig. 57.

Pillars are slender and may be plain, but more often clustered. One characteristic is the detached shaft (often of Purbeck marble), long and slender, only connected with the central shaft by its base and capital, or occasionally by a light intermediate banding. Arches, pointed and single, in pairs or threes (Figs. 29, 30, 44, 45). They are frequently enriched by the so-called "dog tooth" ornament. Fig. 56. Modern work shewn in Figs. 31, 32. The early examples are usually plain, with little or no enrichment. Windows are usually characterised by their narrowness relative to their length. Square-headed windows are not uncommon. Circular windows are found in all periods from Norman onwards. Cusps are very frequently met with in this period. Doorways are usually pointed, but sometimes trefoiled. Porches, though usually shallow, project much further than in the Norman period. Vaulting usually shows the employment of ribs, which often meet at a boss. Fig. 30. (Note the Norman arch in the middle of the rib vaulting, indicating a junction line.) Buttresses are bold and projecting, and often diminish by well-marked stages. Flying buttresses are introduced in this period. Towers are now more lofty in proportion to their width. The east end or chancel is square, and frequently has a group of three lancet windows. The mouldings at the base of columns are often so placed that the hollow would hold water, but this is of course not the intention of these hollows.

Decorated,**1300-1370 A.D.**

The early English style gradually passes by almost imperceptible stages into the Decorated style. And we may find isolated features, *e.g.*, mouldings, windows, etc., which we hesitate to place in either style, because partaking largely of both. As this well-marked style only lasted for a comparatively short time examples are not so frequent as might be wished. General character—Rich ornamentation, large windows, flowing lines of tracery trefoils, circles, etc. Here the ornament is not an addition, but an integral part of the construction. Window openings are often cusped along the inside of the wall thickness. Square-headed windows are not uncommon. The top of the window may also be a part of a circle, or the window may be formed of the segments of a circle. Figs. 33, 35, 47.—Circular windows are also common. Fig. 33.—The clerestory windows of this period are often triangular. Fig. 35.—Tracery may be geometrical, flowing or “flamboyant,” *i.e.*, flame-like. Figs. 37, 38.

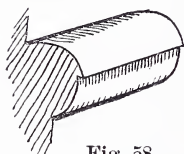


Fig. 58.



Fig. 59.



Fig. 60

The mouldings are not so deeply recessed as in the Early English period. The quarter round and the roll moulding are characteristic. Fig. 58. Another strong character of this period is the “ball flower” ornament well shown in Figs. 36, 59, running round the inner edge of the window opening. It will also be seen in several places in Fig. 33. Another frequent ornament of this period is a four-leaved flower with ball centre, cut somewhat boldly, giving strong light and shade effect. Fig. 60. This is unfortunately not shown in any of our photographs. Battlements introduced in this period become a strong feature during the Perpendicular period. Pillars seldom have detached shafts. The characteristic treatment of foliage, fruit, birds is well shown in Fig. 34. Doorways are larger, wider, and often richly ornamented. Fig. 39

is a simple and early example. They have usually a dripstone which may terminate in heads, bosses of foliage, etc. Fig. 39. The porch may be shallow or projecting, and is sometimes of wood. The arcading running along the walls, *see* Figs. 33, 36, 46, 47, is of a richly ornamented character and the use of elaborated crockets or bunches of foliage, Figs. 33, 34, is frequent. The *Piscinæ* or water drains for use after washing the communion vessels, are frequently richly ornamented, Fig. 34. Buttresses are often made a strong feature in the decoration as well as construction of the building. The East end usually has one large window, Fig. 38. Note the elaborately carved "corbel" from which the arch springs towards the right-hand upper corner in Fig. 33. See also the ornate character of the canopies close to the circular window in this Fig. 33.

Perpendicular, 1370-1550 A.D. A glance at the tracery of the window to our left in Fig. 35. as compared with 37 and 38 shows a change is taking place. The central mullion runs to the top and is accompanied by two other vertical parallel lines. The name well describes this tendency, *i.e.*, to emphasise perpendicular (and horizontal) lines. A rapid glance at the general effect in Figs. 41, 42, 43, 40 will show this cultivation of the perpendicular as the chief feature—while the horizontal line is also strongly pronounced. Panelling surfaces in the manner shown in Figs. 41, 42, is very common both inside and outside a building. Windows are often large in size but cut up into a large number of more or less equal sized rectangular spaces by vertical mullions and horizontal transoms so that the window from the inside almost suggests a network of stones. Buildings of this period, domestic and ecclesiastical, are frequently embattled and the battlements richly ornamented with diaper-like designs. Doorways are wide and nearly always square-headed, embracing a somewhat depressed arch. Fig. 43.—Towers are large and massive, but so richly ornamented that their size does not at first impress us. The angles frequently have double buttresses, and the corners are carried up into pinnacles. Porches usually project boldly, and are

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panelled inside. The well-known "fan tracery" of the vaulting needs only mention. Mouldings are now more shallow, *i.e.*, are broad rather than deep. Crockets are frequently in use, but take on a somewhat square outline. The foliage is often suggestive of a wreath embracing a pillar or capital. Probably the beginner will have less difficulty in readily distinguishing this style than any other. Its general character when once seen is not likely to be mistaken.

Cautions.

Do not attach too much importance to any one feature, *i.e.*, the shape of an arch, or moulding or ornament. In the good old times convenience was often the determining factor. Moreover, later workers copied earlier details. The dates given in our divisions are to be taken only as quite approximate and convenient guides. In the same year two markedly different styles of building might be going on within a distance of a day's journey.

Practical Points for Architectural Workers.

By VARIOUS CONTRIBUTORS.

The point of view in interior photography is a matter of first importance. It is no exaggeration to say that a few inches to right or left, higher or lower, *may* make just the difference between a failure and a success. First, a few words as to the height of the lens from the ground. No rules can be laid down, but experience goes to show that, in a broad and general way, the view point of a horizontal composition should be lower than in a vertical picture. Figs. 46, 47, may serve to exemplify this point. These two views are exactly complementary to one another in the sense that in Fig. 47 the lens was pointing in a direction more or less south, while in the other the lens was pointing in exactly the opposite direction. The same pillar is shown in both pictures. In the case of Fig. 46 the lens was as high as an ordinary tripod would hold the camera, focussing being done while standing up. In Fig. 47 the camera was lowered until focussing had to be done by kneeling on the floor. Roughly we

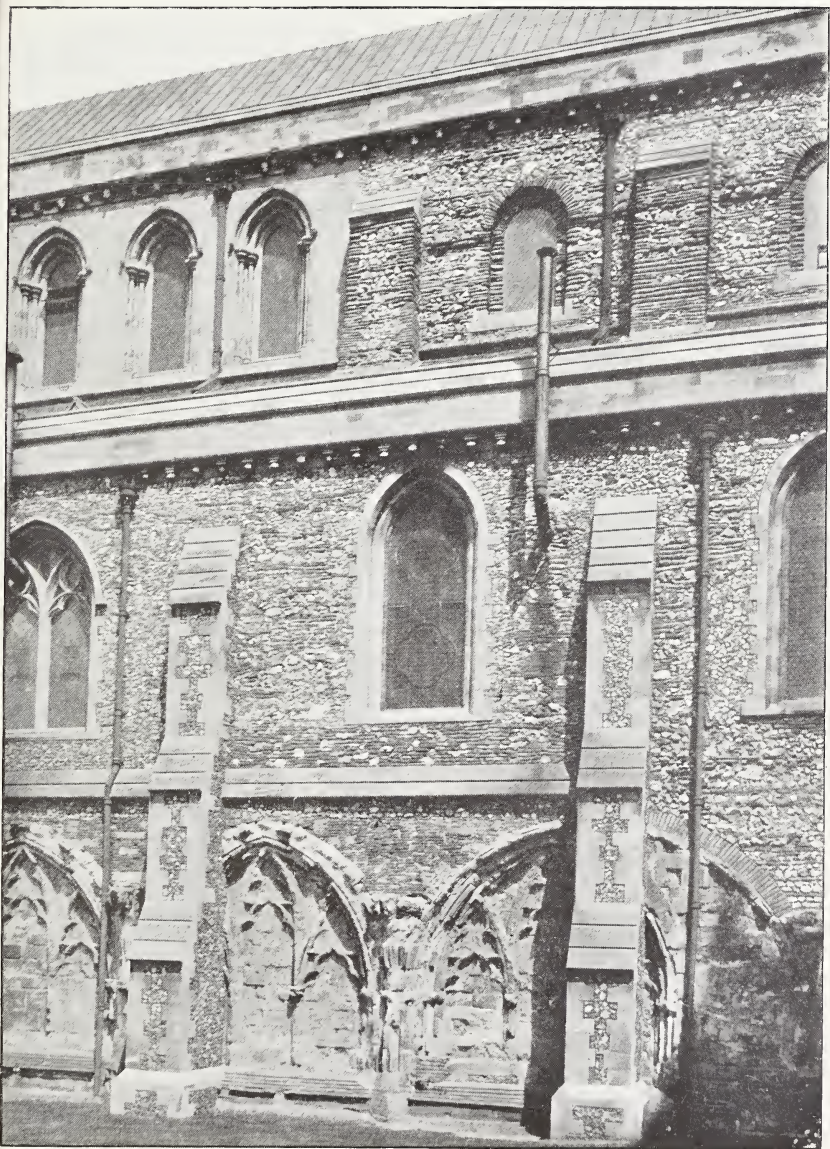


Fig. 44.

SOUTH SIDE, ST. ALBANS.
(Showing Junctions. *Vide* p. 60.)

F.C.L.

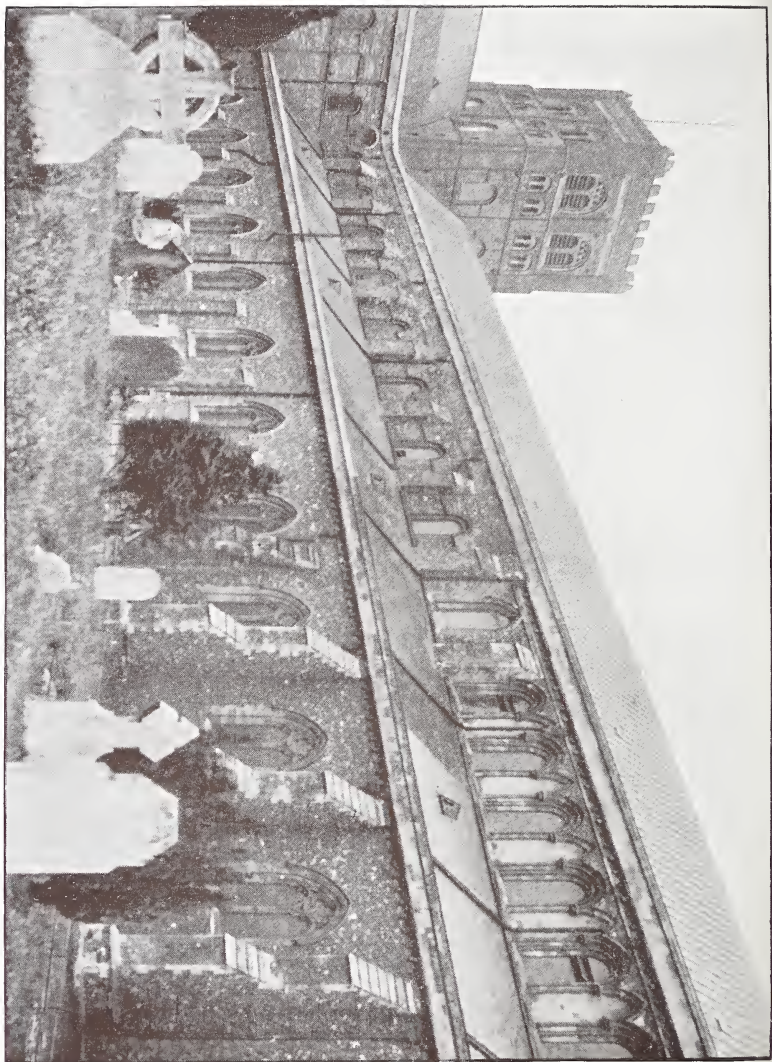


Fig. 45.

NORTH SIDE, ST. ALBANS.
(Showing Junctions. *Vide* p. 60.)

F.C.L.

may say that the view points correspond to standing and seated figures. The difference in these two cases is not very marked, because the most distant part of the floor in either case is not very far away. But one need not look very far among a collection of interiors without seeing the effect of a high-view point with a distant floor. This usually suggests that the floor is not level, but is rising up towards the distance.

Now in order to appreciate the point of the broad principle just mentioned, we must cover up about one-third of the upper part of our vertical picture, and a corresponding one-third of the left-hand portion of the horizontal example, thus leaving us two similar shaped portions. If this be done we shall at once see how the high-view point spreads out the floor, while the low-view points gives a much pleasanter suggestion of floor space.

Pictorially these prints may give us several useful hints or warnings. In Fig. 47 we have no less than three large windows facing us. These three patches of strong light compete with each other for our attention. As a composition it would have been better had we been able to hide the window on our left by a pillar, or by cutting away the left-hand third of the print. If this window be covered over by the hand the picture will be seen to gain in unity of effect at once.

Here again we see the contrast of chairs and no chairs—one need hardly say which is preferable. The rich Decorated arcading, aumbry and piscina will be noticed.

In Fig. 46 we get a peep of the panelled back of the perpendicular screen shown full face in Fig. 40. We also catch a narrow glimpse of the upper part of the watch gallery shown in Fig. 41. The sedilia on our left, with their foliated and crisped Decorated work, will be noticed (Fig. 46). But our chief pictorial interest in this case is due to the contrasting of our highest light with the strong gloom of the roof above. This centralising of contrasts generally has the desirable effect of keeping one's interest in the picture. Indeed one might *almost* lay it down as a guiding principle that windows or other strong lights should not occur along the margins of our picture.

THE PRACTICAL PHOTOGRAPHER.

Photographing Ceilings.—In this connection our difficulties are threefold. First, the ever-present question of exposure; second, the position of the camera; third, focussing. If now our tripod is of such a form that the camera can be held with lens pointing vertically upwards we can then manage somehow—*e.g.*, by lying on the floor or on two chairs—to see the focussing screen. But if we cannot see to focus we must adjust the lens by calculation. The first step is to ascertain the height of the ceiling above the floor. The following is a useful, simple and practical dodge: Take a half-sheet of note-paper with clean-cut edges. ABCD, Fig. 61. Now fold the corner A over so as to coincide with the line DC. The crease or fold DE is neatly and carefully made. In Fig. 62 we may imagine H the ceiling and MK the floor. The operator G carefully notes some object, F, on the wall of the room, such that it is on a level with his eye when in a standing position, *i.e.*, FK is equal to GM. He now holds the folded paper Fig. 61 to his eye so that GC is horizontal, and walks backwards, keeping “half an eye” along the horizontal line GF, and at the same time looking along GE. When the line of sight GE just enables him to see H, the junction of ceiling and wall, his position is noted. The angle EDC being half a right angle tells him that FH is equal to FG or MK.

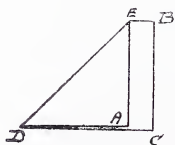


Fig. 61.

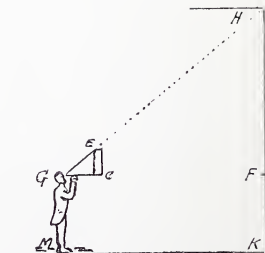


Fig. 62.

But he will very probably be placing his camera on the floor so that the distance of floor to ceiling KF plus FH is equal to KF plus FG or KM. This is readily ascertained. We now can easily focus on some well-lighted object at this distance, either

PRACTICAL POINTS FOR ARCHITECTURAL WORKERS.

inside or outside the building, as convenience dictates. We thus have our lens adjusted so that when the camera is laid on the floor in the centre of the room the central part of the ceiling will be in focus. The next question is "will the entire ceiling be included on our plate?" The length of the ceiling is (presumably) the length of the room. If then we put our camera at the same distance from the wall of the room as the ceiling is from the floor we can then see if the length is included. Similarly for the width of the ceiling or room. Of course having once adjusted the focus some care will be taken not to disturb the adjustment.

Suppose that we wish to take a general view of the ceiling from the centre of the floor, we may easily ascertain where the centre is by remembering that it is where the diagonal lines cross. Lay the camera down, and adjust a chair leg so that the camera, the leg, and one corner are in straight line. Now if the leg, the camera, and the opposite corner are also in line we have got one diagonal. It is then easy to get the other in this way.

As to exposure we must remember that a ceiling is almost always lighted by *reflected* light, and therefore requires a proportional increase of exposure as compared with those parts of the room in direct light. But it should be noted that when snow is on the ground and the building or room has fairly large windows, the ceiling *may* be then lighter in mid-winter than it is in mid-summer.

The colour of the carpet, floor, etc., should be noted. Thus a red table-cloth or carpet will not give us such useful reflected light as a white table-cloth or polished light wood floor. We may then gather the hint that ceiling exposures in small rooms may be shortened by covering table and floor with sheets, or even newspapers.

No useful figures can be given, as so much depends on the size of the windows, colour of the roof or ceiling, etc., besides speed of plate, stop, time of year, etc.

As a general rule a small part of a ceiling is more effective and interesting than a large portion on a small scale.

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The Historic Land Marks of a Building.—The architectural photographer who wants to infuse into his pictures something of the spirit of the building must first become acquainted with its past history and associations. He must in imagination see the building growing and being altered from time to time. The best mental aid to this is the examination of such “junction lines” as may be found. This may be only a slight change in the style of the masonry, different jointings, mortar, stones, etc., or it may be a well-marked change in style and form.

Again, pictorial effect may often be greatly aided by taking advantage of the contrast of one age with the other, the old and the newer work side by side, often bringing out the beauties and characters of each other by force of juxtaposition and contrast of styles. In this case one should not attempt to include more than two styles—or the picture is apt to become puzzling rather than pleasing. In the two illustrations of S. Albans here given, we have selected our view points first to show as many styles as possible at a glance and so be useful to the student and at the same time we have exemplified by their aid some common mistakes from the pictorialist's aspect of the matter.

In Fig. 44 we have a bit of the south outer wall of the building, *i.e.*, south aisle extension. The ruins of the old Roman town (called Verulam) evidently supplied the Norman builders with plenty of material in the form of flat tile or “Roman Bricks”—we may see these freely used in the right-hand upper portion of our illustration. These Roman bricks are thinner and wider than English bricks, which are seen in part of an arch towards the right lower corner. In the right upper corner we have a window and two buttresses belonging to the Norman period. On a level with these, to our left, we have three Early English lancet windows (restored) and also notice a violent contrast in the style of the masonry. Below them is a Decorated window, and below again are the remains of some beautiful arcading of late Decorated style which doubtless formed part of the cloisters. These



Fig. 46.

DECORATED PERIOD.
(High View Point. *Vide* p. 56.)

F. C. L.

Fig. 47.

DECORATED PERIOD.

F.C.L.

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interesting remains are sadly marred by the very modern buttresses. Thus, at a glance, we have Roman, Norman, Early English and Decorated work.

Pictorially, the faults are several. First, too great a mixture or variety of styles. Next, the lighting is flat and feeble. The picture is too large for the space it occupies, and we have not enough foreground to suggest space and give a feeling of proportion. And there is nothing to convey any sense of size or scale. The chief impression given is, that we are looking, not at a building, but at a flat wall.

In Fig. 45 we have a view of the north side of this nave. Here, again, we may trace several landmarks in the stages of the building. We have the tower with Norman, and most probably, Saxon portions. The north transept shows Early Norman work. The clerestory of the nave next the tower is again Norman. This passes to Early, and later Early English (restored), while the north aisle shows different phases of Decorated work.

Pictorially, this example shows the great accentuation of apparent length due to our being too near the western part of the building. Although the nave *is* a long one yet this view showing the long unbroken line of the roof ridge is not a pleasant one. Then, again, the light is monotonous and uninteresting. The tombstones in the foreground, often inevitable in church photography, are here too conspicuous. The blank cloudless sky is emphatically undesirable.

To Prevent Tripod Points Slipping on Smooth Floors.—(1) Push the point of the leg into a round piece of cork. (2) Slip over the point a bit of soft rubber tubing just long enough to enable one to feel the point when the finger is placed flat over the tube end. (3) Knot together three pieces of rough tape, and then fasten the three loose ends to the tripod legs at the middle or lower joint of the leg. (4) Three pieces of common rough card (straw) board placed on the floor for the points to rest on will generally be found quite efficient.

Range of Exposure in interiors may range from the fraction of a second to hours. Two fairly typical cases are shown in Figs. 48 and 49. In the

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former case we have a well-lighted museum gallery. Double-glass top-lights; exposure, $f/16$ half a minute. In the second instance a dark tower-like porch to a well-lighted interior. Exposure, $f/16$ one hour; plate speed, 200 H & D; best summer light. These may be taken as the practical limits of ordinary interiors.

Exposing with Two different Stops.—This is really a very useful procedure in dealing with interiors. The gain is two-fold, *viz.*, in shortening exposure and in giving a pleasingly combined effect of sharpness and softness. The method is as follows:—Suppose that we have determined that our exposure should be equivalent to 15 minutes with $f/16$, but that for a good sharp all-over negative we ought to use $f/32$, which would, of course, mean 60 min. exposure. If now we start the exposure with $f/32$ and give 30 min., then cap the lens and change the stop to say $f/16$ (care being taken not to disturb the camera), and then give a final exposure of $7\frac{1}{2}$ min., we shall have given a combined exposure equal to 15 min. at $f/16$ or 60 min. at $f/32$, and at the same time obtained an agreeable combination of detail with softness. Thus, instead of 60 min. our total time would have been $37\frac{1}{2}$ min., an appreciable difference.

Factors determining Exposure in architectural interiors:—(1) The time of year. (2) The time of day (sun's altitude). (3) State of weather, clouds, etc. (4) Number, size, position of windows; colour of glass in same, their cleanness, etc. (5) Colour of walls of building, *e.g.*, contrast the extremes of white-washed walls and black oak roof. (6) Speed of plate. (7) Stop. (8) Degree of contrast required.

Halation v. Haze.—Experience goes to show that halation-like effect is accentuated in a building in which there is much dust floating in the air; also that different degrees of halation result when equivalent exposures are given to the same objects at different times of day. Thus we get more halation if the sun's light be streaming through a window towards the camera. Moral: Wait until after mid-day before pointing the camera at the east-end window.

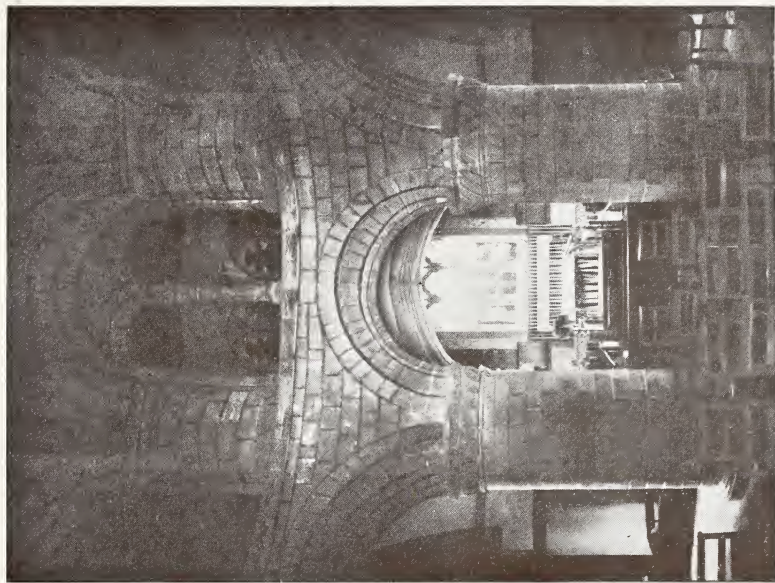


FIG. 48.

F. C. L.

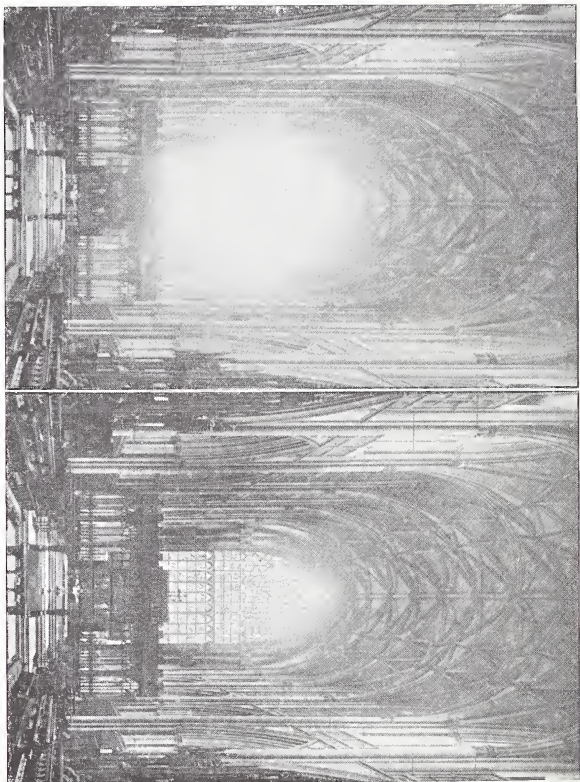
TYPICAL EXPOSURES

(*Vide p. 62.*)



F. C. L.

FIG. 49.



A.

FIG. 50.

BEFORE AND AFTER TREATMENT.

W. G. FLYER.

B.

The Effect of Focal Length in Architecture may best be shown by means of a diagram. In Fig. 63 we may suppose DEF to be the sectional view of a house side, roof and chimney, and A, B and C three view-points. Now, it can be so arranged that by using a lens of dif-

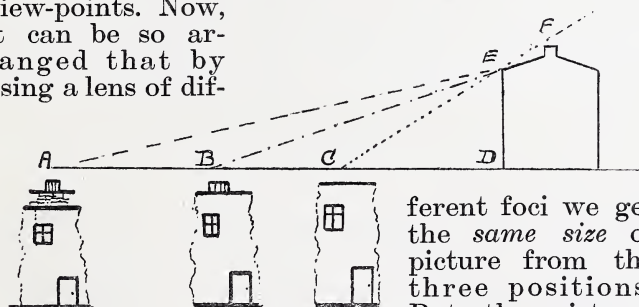


Fig. 63.

ferent foci we get the *same size* of picture from the three positions. But the pictures would be different.

Thus from A we should see chimney, roof and front; from B the chimney would appear to be resting on the front wall; while from C we should see neither roof nor chimney. Now what is here crudely shown with regard to height applies equally to width. Thus in the nave of a church a pillar in two different pictures may appear the same size, but in one case may hide the whole of a window which is seen in the other, and so on.

Focussing in Dark Interiors is facilitated by the use of extra-fine-ground glass, known as "acid-etched." The rough side should be rubbed over with a trace of oil or glycerine. Two or three thin microscopic cover-glasses should be cemented to the rough side by means of Canada balsam dissolved in turpentine, chloroform or benzole. One may be in the centre, another near the corner, and a third about midway between the other two. The focussing eyepiece should be very carefully adjusted by focussing upon a fine hair or fly's wing held against the ground side of the screen by means of a piece of clear glass.

Before finally adjusting the focus it is a good plan to keep the head under the focussing cloth and close the eyes for quite half a minute, and then open them *very* slowly. The flame of a lighted

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candle (or match) held by an assistant and moved from point to point in our picture will be found helpful in accurate focussing. Failing this, any dark object (*e.g.*, door-key or small book) may be laid on a white surface (handkerchief, paper, etc.) and used for the same ends. Our chief difficulty, however, is in seeing anything at all when a small stop is being used. To meet this difficulty the accompanying table has been worked out, and will be found to meet the case when we can ascertain the distance of the nearest and farthest parts of the picture:—

Table to assist the adjustment of focus in dark interiors.
(Distances in feet.)

Nearest Object.	Most distant object.							
	10	20	40	60	100	150	200	300
5	6 $\frac{3}{4}$	8	9	9 $\frac{1}{4}$	9 $\frac{1}{2}$	9 $\frac{3}{4}$	9 $\frac{3}{4}$	9 $\frac{5}{8}$
10		13	16	17	18	18 $\frac{3}{4}$	19	19 $\frac{1}{2}$
20			27	30	33	35 $\frac{1}{2}$	36 $\frac{1}{2}$	37
40				48	57	63	66	70
60					75	86	92	100
100						120	133	150

An example will make its use apparent. Suppose the nearest object in our picture to be a pillar 20 feet away and the most distant a window 100 feet from us. In the left-hand "near" column find 20, and in the horizontal "distant" column find 100. Where these two meet we have 33. Taking our camera into some well-lighted place we measure some object 33 feet from us and focus sharply on that and clamp the focussing screw. Now we measure some object 20 feet away and insert one stop after another until the 20 feet distant object is in sufficiently sharp focus. We now know from our table that objects 100 feet away will be in as sharp focus as those 20 feet from us. We may now return to our original view point and *arrange the picture* with our largest stop (of course, not disturbing the focus arrangement) and then insert the stop we have just found necessary to give a depth of field ranging from 20 to 100 feet.

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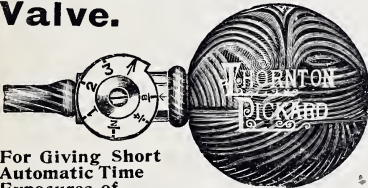
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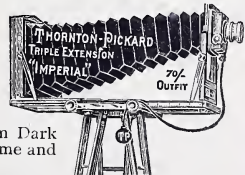
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Exposure Notes and Records.

The following notes may prove interesting as showing the wide variations of times of exposures. Several of the negatives date back to days when speed numbers were unknown, and plates or films were simply described as "quick," "slow," "ordinary," etc.

- 15.—Prior's Doorway, Ely. July, sun, 2 p.m.; $f/45$, "ordinary" plate; exposure 8 secs.
- 16.—St. George's Church, Beckenham. Extension 11 inches. May, 10-11 a.m.; bright sun, $f/32$; exposure 4 secs.
- 18.—As 16. Extension 16 inches, $f/32$, exposure 6 secs. (16 and 18 on orthochromatic plates, 65 Watkin, with telephoto combination, having negative lens of $2\frac{1}{4}$ inch focus.
- 19.—Tower Arch, St. Benet's Church, Cambridge. Eastman Stripping Film, $f/32$, 60 min. June, noon; sun and clouds.
- 23.—Norman Doorway, Prestbury Church. September, 11 a.m.; diffused light; Ilford Ordinary, $f/16$, 2 secs. (C. Gresty).
- 25.—Norman Doorway, Kenilworth Church. Warwick Instantaneous. Afternoon, good light, $f/32$, cap off and on. (Miss G. Evans).



The following note applies to all the exposure notes below this point.

- St. Alban's Abbey. July, sun, 11 a.m.-6 p.m.; plate speed, 200 H. & D. (Seed Antihalol).
- 22.—North Transept. 3-30 p.m., $f/22$, 1 min.
 - 26.—Norman Door and Arcading. 4 p.m., $f/22$, 3 min.
 - 27.—Norman Windows. $f/32$, $\frac{1}{2}$ sec.
 - 28.—Tower. 11 a.m., sun, $f/32$, $\frac{1}{4}$ sec.
 - 29.—Nave. 5-45 p.m., $f/8$, 2 min.
 - 30.—South Aisle. 5-30 p.m., $f/16$, 2 min.
 - 31.—West Front. 2 p.m., $f/32$, 1 sec.
 - 32.—Ornament (exterior). 3 p.m., $f/16$, $\frac{1}{4}$ sec.
 - 33.—Lady Chapel. 4-30 p.m., $f/11$, 5 min.
 - 34.—Carving over Piscina. 3 p.m., $f/32$, 4 min.
 - 35.—Windows (exterior). 11 a.m., $f/32$, $\frac{1}{4}$ sec.
 - 36.—Ball Flower Ornament (interior). $F/32$, 4 min.
 - 37, 38, 39.—Exterior Details. 11-12 a.m., $f/32$, $\frac{1}{4}$ sec.
 - 40.—Screen. 4 p.m., $f/32$, 10 min.
 - 41.—Watch Gallery. 1-30, $f/32$, 7 min.
 - 42.—Perpendicular Detail. 4 p.m., $f/22$, 6 min.
 - 43.—Perpendicular Doorway. $12\frac{1}{4}$ p.m., $f/22$, 15 min.
 - 44.—South Side (exterior). Noon, $f/45$, $\frac{1}{2}$ sec.
 - 45.—North Side (exterior). 5 p.m., $f/16$, 1 sec. (very dull).
 - 46.—Retrochoir, High-View Point. 3-45 p.m., $f/16$, 3 min.
 - 47.—Retrochoir, Low-View Point. 3-45 p.m., $f/16$, 3 min.



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- 6.—The Editor reserves the right to reproduce any print sent in, whether it gain an award or not.
- 7.—Each print must bear on the back (legibly written) the name and address of the competitor, title of picture, and printing process. (It is also desirable to add the name of the plate used and exposure given.)
- 8.—A selection of the prints will be reproduced, together with constructive, suggestive, and helpful criticisms.
- 9.—The Proprietors of *The Practical Photographer* have most generously left the number of Silver and Bronze Plaques and Certificates entirely to the discretion of the Judges, who will be guided in this matter by the number and quality of the prints sent in.
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- 3.—Before finishing the print have at hand No. 4, *The Practical Photographer*. Before Trimming, read pages 7-9, 16; Choice of Mount, 13-14, 17-20, 21, 24, 37, 41; Choice of Title, 38-40; Inscribing the Title, 43-44; Mounting and Mountants, 11-14, 22-23, 29-30, 64, etc. (N.B.—A small matter—like careless trimming, etc.—*may* make the difference of a “Silver” or “Bronze” to you.)



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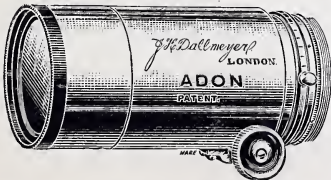
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xi.

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Platinotype Competition and Prints for Criticism.

Will competitors and others please kindly note our rule to the effect that when prints are to be returned stamp must be sent **WITH THE PRINTS**—*not afterwards?*

A. B. (Huddersfield).—You are inclined to over-elaborate your mounts. The two narrow white lines attract too much attention. The quieter style of your figure study is better. This print (boy) is rather grey and flat, suggesting stale or damp paper. Trimming of print somewhat careless and crooked. Park and river print rather too black and white. The high-lights are blank paper. The deepest shadows too evenly dark. Your negative was probably under-exposed and over-developed. Cattle:—Decidedly the best of the three—but here again the contrasts are too strong. The best part is the bit of wall to our left. The cattle are too mixed up to give a good picture, and the sky part much too light.

B. S. (Bedford).—The brush development marks are a little too streaky, and the general arrangement of light and shade gives a “top-heavy” effect. ii. Generally too grey and dead. This looks rather like the effect of stale or damp paper. iii. The printed-out example not very successful, it shows two patches of colour, besides finger marks and other like defects. This is not up to your other work; you must not slip back.

A. L. (Highbury).—“Devotion” and “Contentment” both very much too black and white. The blacks are devoid of detail and flat. Your negatives are probably considerably under-exposed as well as over-developed. “At home” is *very* much better. Expression is too conscious. Your sitter should have been occupied with a book, fancy work, arranging flowers, etc. The white margins to the other two prints are quite a mistake.

E. H. D. (Penybont).—Highly creditable work: composition is tasteful, and the technical qualities of the print quite above average. Your print wants just a shade more pluck. This you would probably get by printing a shade deeper, and then developing on a bath at about 120° F. The mount is rather too blue and cold-looking; a rather darker shade of dull green or brown would have been better.

E. T. S. (Halifax).—You have just missed getting a good thing by cutting the exposure a trifle too short. You probably forgot the existence of so much shadow portion of your picture. The title and signature are a little too conspicuous. Try another print on Sepia paper. Print fully and give a *brief* development on an extra warm developer—say at 160° or 170° F.

H. H. (Oxton).—Technically, a first-rate print and probably as good as this negative will give. But the negative is a little bit at fault. Your shadows come just a shade too dark and solid looking. By coating this (too thin) portion of the negative (printing too dark) with ground glass varnish (on the glass side of the negative) you might probably be able to get considerably more value out of these thin parts. Then again, your sky part is just a trifle too weak, *i.e.*, wants printing a little more while the rest of the picture is shaded.

A. T. L. (Moston).—Three exceptionally good prints, all well up above average, showing that you are evidently a careful as well as capable worker. The weakest feature is the blank white sky in the landscape. The mounting also is in excellent taste and quite suitable. The writing of the titles neat, but too large in two cases. A title should not be seen or noticed until one looks for it.—Your “Poppies” is on the whole the best, and you are to be congratulated on starting platinotype printing with such a praiseworthy example.

E. H. (Strawberry Hill).—Again you are erring on the side of solid blacks. For once allow yourself the luxury of an over-exposed negative. Try a similar study. Use a large sheet as reflector, give double exposure, dilute your developer with an equal quantity of water and aim at a soft delicate negative.

W. W. (Mewston).—Two quite excellent prints, which you have not mounted to quite the best advantage. The colour of the prints just a little too cold and grey. Try a warm developer; also try a rough surface paper. For prints of this size a smooth paper is not so good. Landscape figure too obviously posed. Sky part too white. River scene—this is the better composition. Sky good. Try and get the right-hand lower corner a little darker generally by shading the other part of the negative during part of the printing.

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THE PRACTICAL PHOTOGRAPHER.

C. E. C. (Wickham).—Green mount much too vivid in colour. Other two have too many lines round the print. The writing of titles very neatly done, but letters are just a *little* too large and white, *i.e.*, too conspicuous. The prints themselves are also nearly good, but in all cases are a little too strong in contrast. You are evidently over-developing your negatives. There is a common but mistaken idea abroad that one requires a plucky negative for platinum printing. What one does want is delicacy, with a good range of gradation—a negative without harshness of contrast and without flatness anywhere.

C. B. A. (London).—The goods yard has been well-tried for, and though not beyond criticism, is yet a promising study for another attempt. Next time avoid the group of telegraph wires cutting off a triangle from the sky. Also try for a little more gradation, less pronounced contrast. (2) The water cart is also unconventional and fresh, but your ground does not look solid enough—not so solid as your trees. The sky in this study leaves a good deal to be desired. (3) Hop poles. The subject itself is not at all promising. Far too liney and complicated. We advise your abandoning that negative. Your tendency seems in the direction of under-exposure. But for enlarging purposes the other extreme would be far better. Indeed, the negative which best enlarges usually gives a feeble contrast contact print.

V. W. (Liverpool).—Your enlargement is somewhat weak and foggy, especially towards the corners. It is quite likely that your illuminant may be at fault or the lens does not cover the plate thoroughly. The paper also does not seem quite satisfactory. Try some other brand, and select one with a rougher surface. Although you are using daylight, yet it may be that your reflector is at fault, and that your negative is unevenly illuminated. Not knowing the exact arrangement for illuminating the negative we cannot prescribe definitely. But we incline to the opinion that it is chiefly a matter of faulty lighting.

J. B. A. (Belfast).—This is a case of a picture suffering from too much fine detail all over. Then again, the two carts are somewhat confused one with the other. And again, the sky is too much like white paper, not enough like atmosphere and sky. Your view-point has been well chosen and the technical qualities are excellent, but so much detail is bewildering. Try this negative with the roughest paper you can get.—Your print is numbered 2, though only one print reached us.

F. B. (Croydon).—Do not use rounded corners for your prints, it gives a workbook lid appearance. The prints are too contracted in light and shade. Your negatives have both been under-exposed and then over-developed. You might get softer prints by using tissue a few days old. The white margin round 50 is quite a mistake. In both cases the definition is too evenly distributed all over the picture. It is a good plan to put your chief object of interest in sharp focus and slightly subdue the other parts.

H. P. R. (Durham).—The sky is too evenly divided into a light and a dark half. You could best spare about half an inch from the left-hand side. Print rather too red in colour to be pleasant, and this redness is accentuated by the green mount.—2. You have the making of a good picture here. The two children to our right are too conspicuous, because too light. Rub the negative down with methylated spirit, using a thin card mask. On the print just tone down the small child's hat to our left. Do not get the sky too dark. At present that is the tendency. This negative is well worth enlarging.—Yes, your work certainly is improving in pictorial quality. Thanks for your kind words. We are amply repaid by knowing that our hints have been appreciated. Do not hesitate to send again.

B. S. (Bedford).—The two streaky objects in the right lower corner are by no means desirable. The picture is too square in shape for the nature of the composition, and the colour not very agreeable. There is evidently something not quite right about your procedure with the iodine and sulphide toning process, which is capable of yielding very fine rich browns. A light foreground with dark middle distance does not often yield a satisfactory chiaroscuro arrangement. Portrait. What this picture obviously wants is a little more vigour—pluck—life—contrast. At present it is rather weak—washed-out-looking. What is needed is a little more strength in the darks. You might give them a little strength by using a plain rather light grey mount. But that would not be quite enough. Lighting good, but the chair arm projecting beyond the chest makes an awkward line. The girl is rather "slouchy" in position.

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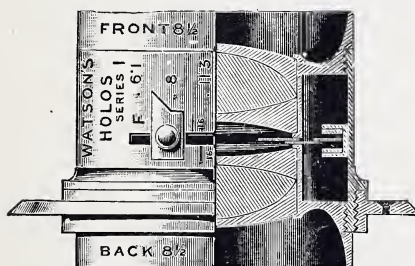
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XV.

Kindly mention "The Practical Photographer."

THE PRACTICAL PHOTOGRAPHER.

F. G. P. (Crumlin).—If you do not put your name and address on the back of each print you must not be surprised if they get "mixed" with others and do not come back to you. See rule 2. You are over-doing the elaboration of your mounts. There are too many different colours, and the narrow light lines are too insistent. The mount should help, not compete with the print. A. A good figure, but awkwardly posed. The lighter parts of the background compete with the figure. B. Distribution of light and shade well managed. You have too many small objects, flowers, etc., in such sharp focus that they are rather bewildering. C. This is the best of the three, all things considered. But for some strange reason a man with a pipe in his mouth never looks quite satisfactory in a photograph. Man's arms and face are rather too light—too waxv-looking.†

H. D. (London).—Colours of mounts in all three cases decidedly pleasant and tasteful. But it is very doubtful if you have not lost considerable pictorial value by the use of white paper round the picture. Thus in No. 2 the highlights of the flowers are weakened by the surrounding white paper, while the dark parts are at the same time made to look darker than they really are. In 1 and 3 your camera was too high up above the ground. This spreads out the foreground and makes the distance seem to rise up in an unpleasant manner. 3 is technically fairly right, but 1 is too chalky and harsh in contrasts, and this negative is evidently somewhat under-exposed and over-developed. In woodland subjects of this kind it is far more important to select a pictorial foreground than an attractive distance.

J. R. R. (Burnley).—You have evidently carried development a little too far and so lost the needful degree of detail and modelling in the distance. The colour of the print and mount are too near to each other for good general effect. The three large tree trunks are rather too similar in length and width, and so tend to cut up your picture into rectangular patches.

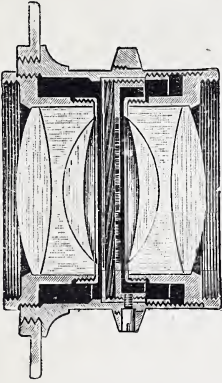
J. J. W. (South India).—The picture is one of great interest, and also of technical quality above average. It is difficult to suggest any modification, except that you might safely have given a little longer exposure to the negative with a view to getting rather more detail in the shadows. Pictorially, the print leaves a good deal to be desired in the matter of grouping, etc. But of course, we fully recognise the great difficulty under such circumstances.

E. H. (Strawberry Hill).—1. General tendency to excessive contrasts, *i.e.* print too black and white. Tree trunks, solid black; water, white paper, etc. A view seen through trees is very seldom satisfactory in a picture, though attractive in nature.—2. Figure too obviously posed and the ground impossibly light. It does not look solid and substantial enough. 1 and 2 are again badly under-exposed. This is your usual tendency. 3 is better generally. In this case the sky is too solid and muddy looking. Beware of putting too many lines round your print.

W. H. W. (Clapton).—The whole turn out of your print shows both care and taste, though we do not care for quite so warm a colour of print. We also think that you would get a more atmospheric effect with a rougher paper. This would also have the advantage of subduing some of the detail which is at present rather too much in evidence.

A. B. (Carlisle).—Your print‡ was very improperly packed, and arrived much crushed. Another time pack flat with cardboard. Good idea to turn your figures' backs to the camera. The two large white objects are rather disturbing, and the rest of the picture is generally somewhat too dark. It reminds one of a tune of only two notes. The chief charm of a picture is due to its varying light and shade. You have greatly under-exposed.

H. M. K. (Bolton).—1. The composition or arrangement is hardly simple enough for good decorative effect. Technically, the print is at fault in the matter of over strong light and shade. The darks are too dark, and the petals too evenly light, *i.e.*, not enough gradation. This points in the direction of a negative which is too dense in the high-lights and lacking in shadow detail. Most flower negatives are under-exposed and over-developed. What one wants is delicacy rather than brilliancy. 2. The two girls are rather confused one with the other. Just at first one thinks of a Barnum curio—two heads and one body. The picture generally is inclined to be top heavy, and the patch of light drapery is too large and too light for its intrinsic interest. In both cases you have carried the toning a trifle too far.



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Edited by the
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xvii.

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THE PRACTICAL PHOTOGRAPHER.

From Messrs. Zeiss (Margaret Street).—We have received a pamphlet called "Hints on the selection of Zeiss Objectives." This is not only a well-arranged price list, but also contains some really valuable reference tables as to view angles. This pamphlet is one of the few that distinguishes between view-angle and image-angle—a matter of no small importance in certain cases. This booklet should certainly find a place on the reference shelf of all who take an intelligent interest in lens matters.

The Camera House Journal, No. 4 (Messrs. Butcher & Sons), is just to hand. This go-a-head little trade pamphlet contains an admirable "straight talk" entitled "A Lesson on the Lens," and is accompanied by a curious combination picture showing Camera House and Westminster Abbey side by side. There is also some excellent advice given on the subject of focal plane shutters, and also hints on backgrounds. The monthly rummage page contains a long list of bargains for wide-a-wake dealers.

Messrs. T. Christy & Co. (4, Old Swan Lane, E.C.), send us a price-list of Dr. Schleussner's famous plates and films. The pamphlet contains a most curious and striking illustration of a bullet travelling 900 metres (say, rough, 1000 yards) per second, with an exposure of 1,000,000th of a second. This may serve to show the high degree of sensitiveness of these "Extra rapid" plates.

Messrs. Cassell & Co. have now in course of publication "The Book of Photography." Edited by P. N. Hasluck. This is to be completed in twelve monthly parts, whereof the first three are now before me. The scheme of this work is very wide and comprehensive, including Practical, Theoretical and Applied Photography. Each part is profusely illustrated with line and half-tone reproductions, showing a vast choice of apparatus and technical examples. Among the subjects already treated are Cameras, Tripods, Shutters, and sundry apparatus, Plates and Films, Exposure, Development, Intensification and Reduction, Preparing the Negative for Printing, etc. An excellent concise glossary of terms is included in parts 2 and 3. The Editor is to be congratulated upon having got together so much useful information in convenient form for reading or easy reference. We look forward to seeing the future numbers of this work.



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P.S.—For description of Prize Camera, see p. xi., *The Practical Photographer*, No. 6.



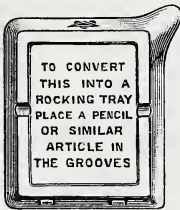
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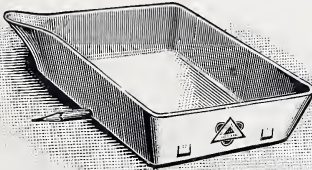
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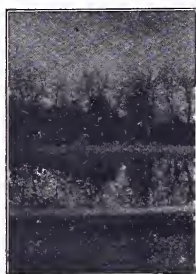
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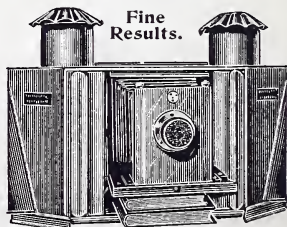
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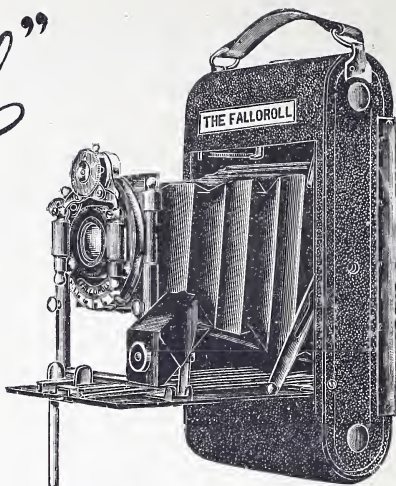
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